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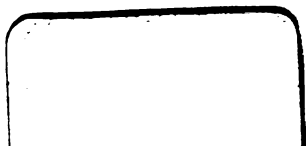
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THE
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MOST ORNAMENTAL AND CURIOUS
HARDY FLOWERING PLANTS,
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AND
FLOWERING SHRUBS;
WITH THEIR
SCIENTIFIC AND ENGLISH NAMES;
BEST METHOD OF CULTIVATION AND PROPAGATION.

BY
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*Author of Hortus Britannicus, Hortus Suburbanus Londinensis, Botanical Cultivator,
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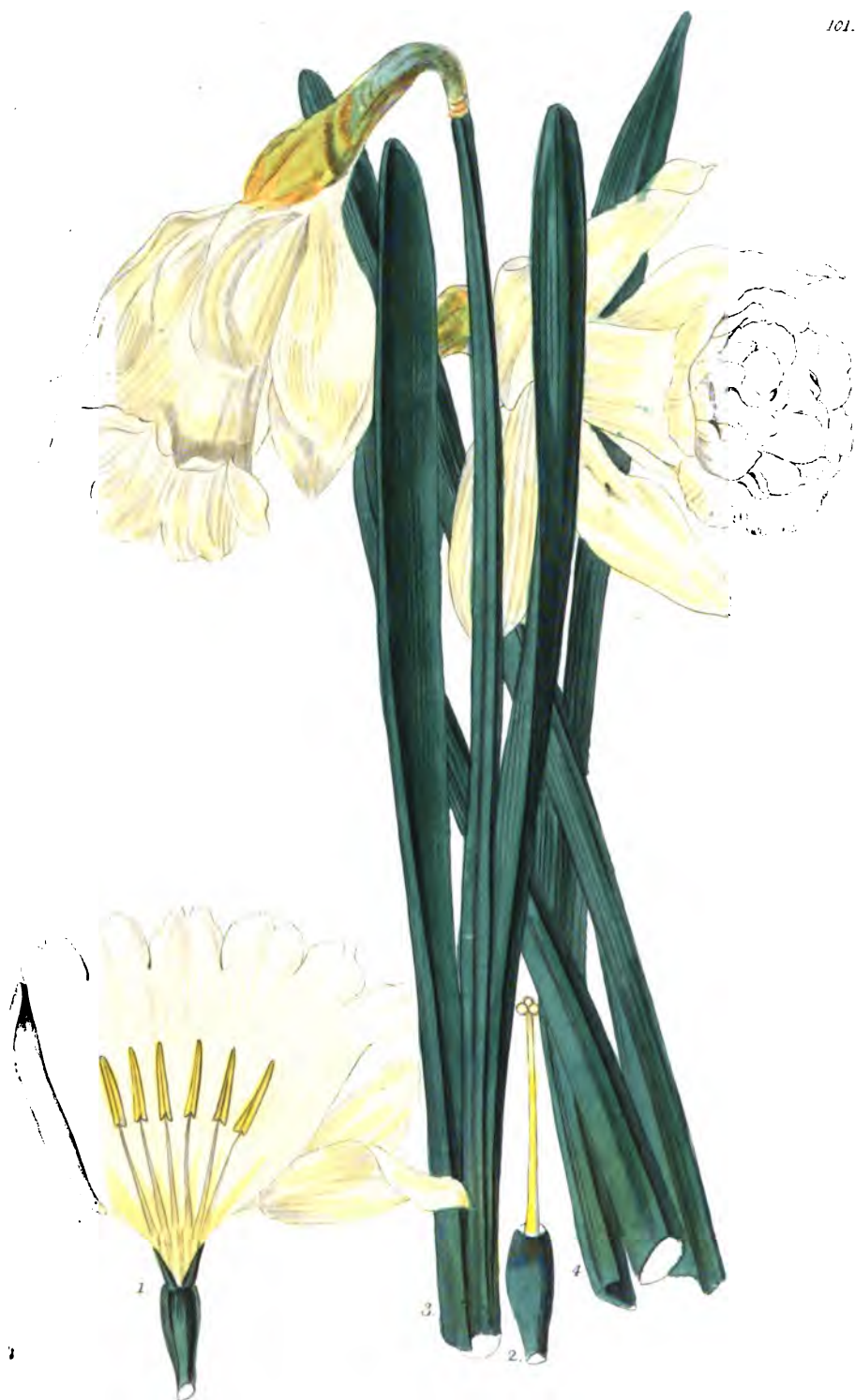
VOL. V.

5 LONDON:
JAMES RIDGWAY & SONS, PICCADILLY.

MDCCCXXXVIII.

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AJAX cernuus.

Drooping creamy white Ajax.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr.* 1. p. 296.

Sect. V. NARCISSINÆ. Radix bulbosa. Spatha monophylla. Flores umbellati, raro solitarii. Perianthium tubulosum petaloideum, 6-partitum, coronatum.

AJAX. *Spatha* uniflora. *Perianthium* 6-partitum, patens: tubo turbinate; coronâ grandi poculiformi perianthii laciniis subæquanti. *Genitalia* recta. *Filamenta* libera, æqualia; ad basin tubi inserta, æqualiter, et ad ejus lacera paululum adnata, coronâ sæpe ter breviora. *Antheræ* lineares longæ. *Ovarium* triloculare, trivalve; *valvis* biseptiferis. *Ovulæ* numerosæ ovatæ, quadrifariam insertæ.—*Herbæ* (Europææ) *bulbosæ*; *bulbis tunicatis inferne rotundatis, superne conicis*; *foliis semper bifariis loratis grosse nervoso-striatulis plano-canaliculatis plus minus glaucis, ante anthesin fere semper erectis*. *Scapis semper unifloris*. Haworth in *Narcis. revis.* in supp. pl. succ. p. 111. parum mutatum. *Swt. hort. brit. edit.* 2. p. 514.

A. cernuus, foliis lorato-linearibus canaliculatus; subtus carinatis longitudinaliter striatis glaucescentibus, coronâ cylindraceâ crispâ 6-lobâ: lobis rotundis integerrimis, segmentis perianthii ovatis obliquis, flore cernuo.

Ajax cernuus. *Haworth on the Narcissean group of plants in the philos. magaz. and annals*, Aug. 1, 1830, p. 132; and in a *Monograph on the Narcisseæ*, by A. H. Haworth, in an appendix to the end of Vol. 1. of *Sweet's British Flower Garden*, series 2. p. 2. col. 2.

Narcissus cernuus. *Roth catalect. bot. fasc.* 1. p. 43. *Neue Beytr. zur Botan.* p. 187. *Schult. syst.* 7. pars 2. add. p. 1732. non *Salisb. prodr.*

Leaves lorately linear, scarcely acute, glaucescent, channelled on the upper side, hollowly keeled at the back, prominently striated with numerous longitudinal lines. *Scape* slender, erect, but bending round at the point, somewhat compressed, with 2 flat edges, striated with numerous lines. *Spathæ* ovate, rounded at the end, membranaceous, bursting on the upper side. *Ovarium* below the flower, oblong, green and glossy, 3-celled and 3-valved, 2 septums passing up the centre, and each bearing 2 rows of ovulæ. *Perianthium* deeply 6-parted, segments oblong-elliptic, acute, more or less twisted, longer than the tube. *Crown* about the length

of, or a little longer than the segments, tubular, deeply and regularly 6-lobed, the lobes rounded, entire, somewhat undulate or curled at the margin. *Stamens* 6, inserted in the base of the tube, nearly of equal length : *anthers* linear, all included in the crown. *Style* smooth, longer than the stamens, but also included within the crown. *Stigma* slightly 3-lobed, hollow on the upper side, pustulate.

The double variety differs solely from the single, by its crown being filled with petals, and its stronger and more robust scape. For the opportunity of giving the present figure of this beautiful species of *Ajax*, we are obliged in part to Mr. Thomas Milne, of the Fulham Nursery, for the single variety, and in part to the Reverend Mr. Ellicombe, Vicar of Bitton, the possessor of a fine collection of *Narcissi*, and of hardy herbaceous plants ; and of whose liberality we feel highly sensible.

The present beautiful plant has been confused ever since Roth published it, with *A. moschatum*, by all Botanists, until Mr. Haworth obtained it from Mr. Ellicombe, of Bitton ; and on comparing it with Roth's *Beitrag*, he immediately recognised it as the same as his *cernuus* ; it is certainly the most distinct and handsome species of the whole genus, and is nearest related to *N. moschatum* and *N. tortuosus*, particularly the latter, with which it agrees precisely in colour.

Ajax is a poetical name ; he was a warrior in the siege of Troy, of gigantic size and strength, and the most valiant Greek, next to Achilles.



1. The flower spread open to show the insertion of the Stamens, and the beautiful 6-lobed crown. 2. Ovarium, terminated by the Style and bluntly 3-lobed Stigma.
3. Single flower. 4. Double.

TULIPA Oculus solis.

Sun's-eye Tulip.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. p. 292.

TULIPA. *Perianthium* 6-phyllum, petaloideum, campanulatum: foliola erecta aut subpatentia non nectarifera. *Stamina* 6, basi foliorum inserta. *Antheræ* posticæ. *Stylus* 0. *Stigma* sessile, trilobum, cristatum, aut subcapitatum papillosum. *Capsula* oblonga, obtuse trigona. *Semina* numerosa, plana.—*Folia* vaginantia, radicalia et caulina. *Scapus* 1 vel rarius 2-3-florus, erectus aut subnutans, rarissime aphyllus.

T. *Oculus solis*, caule unifloro glabro foliis subæquali, flore erecto, perianthii laciniis oblongo-lanceolatis subæqualibus patentibus apice subpubescentibus, maculâ baseos elongatâ angustâ, foliis lanceolatis longe acuminatis.

Tulipa Ocula solis. *St. Amand Soc. d'Agr. d'Agen.* 1. p. 75. *Lam. et DC. flor. franc.* 3. p. 300. n. 1906. *Schrad. n. journ.* 4. p. 88. *Loisel. flor. gall.* 1. p. 199. (exl. pl. e Gallo prov. vid. spec.) *Schult. syst.* 7. p. 377. *Reboul Tulip.* p. 3. n. 3. *Redout. liliac.* t. 219. *Trattin. tabular.* 55. *non Bot. Reg.*

Tulipa pyrizana. *Merian. Surinam,* t. 5. f. 14.

Bulb large, rounded at the base, and tapering upwards, clothed with a loose ragged brown skin, the bulb itself slightly pubescent. *Scape* erect, leafy, smooth and cylindrical, about a foot in height, of a shining pale yellowish green. *Leaves* densely pubescent, and fringed with short hairs, about 10 inches long, sheathing the stem at the base, about the length of the scape, and from 4 lines to an inch and a half in breadth; lanceolate, tapering to a long slender point, very glaucous, hollow on the upper side, prominently and longitudinally striate at the back. *Flowers* red, or striped with red and yellow, with a dark circle at the base. *Perianthium* of 6 petal-like leaflets, nearly equal in size, and spreading widely open when expanded, connected into one at the base, in which part the stamens are inserted: *leaflets* elliptically lanceolate, abruptly acuminate, elegantly striate, imbricate downwards, but distinct at the points, which are

tipped with a very small bunch of wool. *Stamens* 6, inserted in the base of the perianthium, every other one longer than the others: *filaments* broad at the base, more or less hollow in front, and convex at the back, tapering upwards to a sharp point, which is inserted into the base of the anther. *Ovarium* reaching to the anthers, smooth, acutely triangular. *Stigma* sessile, 3-lobed, the lobes short, scarcely reflexed at the ends, somewhat pustulose.

We are glad now to have the opportunity of presenting our readers with the true *Tulipa Oculus Solis*, which has never been before published in any modern English publication; the three figured in the Botanical Register all belong to *T. præcox*, of Tenore, which is the one already figured in our Flower Garden, which we received from Tenore himself; the variety given by Mr. Lindley in the last Number of the Botanical Register, 1419, is precisely the same figured in that work in a former Number, vol. 3, t. 304, and both are precisely the same as ours, figured in the first series of our Flower Garden, t. 157, so that the true *Oculus Solis* has not been figured in the Register at all; the Persian *Oculus Solis*, with its gigantic flower, and hairy, instead of woolly bulb, is, without doubt, a very distinct species.

Our drawing of this beautiful species of Tulip was taken from a bulb given us by our friend, Mr. W. Anderson, Curator of the Botanic Garden at Chelsea; he received that, and several other Italian species, from the Apothecaries' Company, who had imported them from Italy as Colchicum roots; there are several beautiful species amongst them, but we were rather too late in examining them this season, having let *T. strangulata* go by of Reboul, without observing it; but we have another species, the *T. Bonarota* of Reboul, which, with its two beautiful varieties, will be figured in an early Number; that, instead of having a black mark at its base, like *T. Oculus Solis*, or Sun's-eye Tulip, has a bright azure blue one, and is a most beautiful plant. *T. strangulata* is the worst of the three, but is nevertheless a most beautiful and elegant plant.

For the derivation of the generic name, see p. 97, of the present series.



1. The real species. 2. A beautiful variety of it. 3. Bulb. 4. Stamen. 5. The 3-sided Ovarium, terminated by its large 3-lobed crested Stigma.



C. l. l. l.

Pub. by J. Ridgway July 1821.

AQUILÈGIA Garnieriana.

Miss Garnier's Columbine.

Linnean Class and Order. POLYANDRIA PENTAGYNIA.

Natural Order. RANUNCULACEÆ. *DC. reg. veg. syst.* 1. p. 127.

Tribus IV. HELLEBOREÆ. *Æstivatio* calycis et corollæ imbricata.

Petala nunc 0, nunc irregularia bilabiata nectarifera. *Calyx* petaloideus.

Carpella capsularia intùs dehiscentia polysperma. *DC. prodr.* 1. p. 44.

AQUILEGIA. *Supra folio* 55, *series* 2.

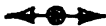
A. *Garnieriana*, calcaribus apice involutis petalis multo longioribus apice nodosis, capsulis intùs pilosis, caule paniculato-ramoso tenuiter piloso, sepalis rotundo-ovatis obtusis subemarginatis, foliis caulinis inferioribus ternatis : foliolis tripartitis cuneato-trilobis obtuse dentatis : superioribus tripartitis ; segmentis lobatis integerrimisque apice emarginatis, bracteis oblongis obtusis.

Perennial. *Root-leaves* ternate : leaflets petiolate, deeply 3-parted, broadly wedge-shaped, or dilated at the ends, more or less lobed, those on the lower part of the stem ternate, the leaflets deeply divided into 3 segments, which are very broad, and lobed with wedge-shaped lobes, more or less toothed, and terminated with a little notch at the ends, underneath much veined with branching veins, and bearing a sort of farinaceous powder : *upper leaves* ternate or deeply 3-parted, the leaflets oblong, with a notch at the ends, some toothed a little towards the end, others entire. *Petioles* on the stem-leaves dilated at the base, and hollow on the upper side, occasioned by the membranaceous edges which bend upwards, and surround the stem a little at the base ; the upper part, as well as those on the leaflets, thinly covered with spreading hairs. *Stem* erect, somewhat flexuose, slightly but sharply angled, striate, thinly covered with spreading hairs below, but increasing in number upwards, where they become shorter and more numerous, more or less tinged with purple. *Bractes* oblong, 2 or 3-leaved, or entire, obtuse, edged with purple, and veined. *Flowers* in a sort of loose panicle, nodding. *Peduncles* slightly angular, very hairy, also more or less tinged with purple. *Sepals* very broadly ovate, slightly emarginate at the point, tapering to the base, alternate with the petals, hairy on the outside, of a bright

blue purple, glossy on the inside, tipped with pale yellowish green, every alternate one less than the other. *Petals* 5, lengthened down into a long spur at the base, which is involute, and terminated in a glossy knob at the end: *spur* hairy, of the same colour as the sepals: *limb* 2-lipped, the inner lip almost obsolete, terminated in a sort of hollow callosity, outer lip erect, contracted and hollow at the base, where it is of a blue purple, spreading upwards so as to be of a spathulate form: of a bright straw-colour, thinly hairy on the outside. *Stamens* numerous, surrounding the carpellas, unequal in length: *filaments* smooth, connected in sets at the base: inner ones membranaceous, flat, surrounding the carpella, linear, 2-ribbed outside, lacerate at the ends: *anthers* 2-lobed, opening at the side, for the exclusion of the pollen, and united by their base to the filaments: *pollen* yellow. *Carpellas* 5, smooth at the back, but clothed with long hairs in front. *Styles* smooth. *Stigma* a small blunt termination.

For this beautiful and splendid hybrid production of *Aquilegia*, we are obliged to Miss Garnier, of Wickham, Hants, in whose collection it was raised from seeds; the seeds were produced from *A. sibirica*, figured at t. 40. of the new series of our Flower Garden; it was impregnated with the pollen of *A. vulgaris*; it is quite hardy, succeeds well in the open borders of the Flower Garden, and nearly equals *A. sibirica* in beauty; our specimen of *A. sibirica* was a monster, as we supposed, when publishing it, we having been obliged by a large plant sent to us by the favour and kindness of Miss Garnier.

For the meaning of *Aquilegia*, see *supra*, folio 40.



1. One of the Sepals. 2. One of the Petals, with a large knob at the end of the Spur. 3. Stamens. 4. The 5 barren Stamens connected. 5. The 5 Carpella, terminated by the long slender Styles and minute Stigmas.



L. D. Smith del.

Reb. by J. Ridgway. July. 1881.

Ward del. 7. 7

WISTERIA frutescens.

American Wisteria.

Natural Order. LEGUMINOSÆ. *DC. prodr.* 2. p. 93.

Subordo I. PAPILIONACEÆ.—*Tribus* V. PHASEOLEÆ. *Supra fol.* 211.

WISTERIA. *Supra fol.* 211, series 1.

W. frutescens, alis uniauriculatis, ovario glabro.

Wisteria frutescens. *DC. legum. mem.* IX. p. 371.

Wisteria speciosa. *Nutt. gen. amer.* 2. p. 116. *Spreng. syst.* 3. p. 255. *Swt. hort. brit.* p. 121.

Thyrsanthus frutescens. *Ell. journ. ac. sc. phil.* 1818. 1. n. 13. p. 371.

Apios frutescens. *Pursh fl. amer. sept.* 2. p. 474. *Swt. hort. sub. lond.* p. 163.

Glycine frutescens. *Linn. spec.* 1067. *Willden. sp. pl.* 3. p. 1067. *Hort.*

Kew. ed. 2. v. 4. p. 298. *Botan. magaz.* 2103.

Phaseoloides frutescens caroliniana, foliis pinnatis, floribus cœruleis conglomeratis. *Hort. angl.* 55. t. 15.

Stem shrubby, climbing to a great height, young branches pubescent. *Leaves* pinnate, pubescent; the leaflets ovate, acute, petiolate, 4 or 5 pair; and terminated by an odd one, the footstalks short and fleshy, downy. *Petioles* downy, channelled on the upper side, and rounded on the lower, swollen at the base, and producing two slender stipule-like glands at the base of each pair of leaflets. *Flowers* of a palish blue, in a close terminal raceme. *Bractes* large, acute, pubescent, purple, imbricate, and enclosing the flowers before expansion, but dropping off as the flowers expand, and leaving them naked. *Pedicles* short and stout, spreading, pubescent, or thickly clothed with short hairs. *Calyx* campanulate, blunt at the base, 2-lipped, purple, thickly clothed with short hairs; upper lip short, nearly truncate, toothed with two very small teeth: lower lip trifid, the laciniae erect, broadly lanceolate, acute. *Vexillum* broadly rounded, lined with innumerable faint lines, eared on each side, blue, with a greenish yellow spot at the base, above the unguis, encircled with white; unguis rigid, lined with a rigid plate, which terminates in a sort of flat point on each side, at the summit, where it is partially separate. *Wings* joined into one at the point, but distinct below, where each is termina-

ted by a long subulate ear on one side, nearly as long as the unguis; not two ears on each, as we believe was meant by Decandolle, and would appear to be the case by Nuttall's description; though we believe he meant one on each, considering the two wings when joined as one. *Keel* similar to the wings, but shorter, and joined lower down, acutely keeled, the ears shorter and broader. *Stamens* 10, diadelphous. *Ovarium* smooth and glossy, several seeded. *Style* smooth, ascending. *Stigma* a small head.

This beautiful climbing plant is the original species of *Wisteria* of Nuttall, who named it "in memory of Caspar Wistar, M.D. late Professor of Anatomy in the University of Pennsylvania, and for many years President of the American Philosophical Society; a Philanthropist of simple manners and modest pretensions, but an active promoter of science."

A twining shrub, with pinnated leaves, flowers racemed, 1-bracted, bractes very large, and extending long beyond the flowers imbricately enveloping the flower-buds, coloured and deciduous, all dropped off from the lower part of the raceme, while the upper part is as thickly clothed with them; legume long and coriaceous; seeds large. The greater part of the above is copied from Nuttall.

This beautiful plant, though but little cultivated, is far superior in beauty to *W. chinensis*, and is the more desirable, as it is in full beauty when the other has done flowering: it is also a very free bloomer, and strikes readily by young cuttings, planted under a hand-glass, but the glass must have air given it, or they will damp off; it must be on a little heat.*



1. Calyx. 2. Vexillum. 3. The 2 Wings. 4. Keel. 5. The 10 Stamens; 9 connected nearly their whole length, the 10th distinct. 6. Pod terminated by the long slender Style, and minute Stigma.

* Our drawing was made from a fine specimen received from Messrs. Whitley, Brames, and Milne, two years ago; but as the flowers at that time had all dropt their bractes, we were glad to see it in flower again, about a fortnight since, against a wall in the Horticultural Society's Garden, at Chiswick, by the side of its beautiful congener, *W. chinensis*. Mr. Munro was kind enough to give us a fine specimen of it, as soon as we asked him.



J.D. Smith del.

Pub. by J. Ridgway, Aug. 1831.

Walden & Co.

ŒNOTHERA anisóloba.

Unequal-lobed Evening Primrose.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. ONAGRARIÆ. *DC. prodr.* 3. p. 36.

Tribus III. ONAGRÆÆ. Fructus capsularis, loculis polyspermis, seminibus non alatis. Calycis tubus ultrà ovarium productus. Stamina petalorum numero dupla.—*Herbæ interdum basi suffruticulosæ.*

ŒNOTHERA. Supra folio 19, series 2.

Sect. III. ŒNOTHERIUM. Stigma quadrifidum, antheræ oblongæ, fructus obovato-clavatus sæpè octocostatus, valvis obovatis. *DC. loc. cit.*

Œ. anisoloba, caule suffruticoso elato stricto ramoso pubescenti-hirsuto, foliis radicalibus ellipticis integris paucidentatis: mediis ellipticis argute dentatis, basi laciniis variabilis linearibus acutis divaricatis; superioribus inæqualiter pinnatifidis, segmentis divaricatis terminali maxima, ovarium tetragonum, tubo corollæ longissimo, petalis maximis imbricatis margine crenulatis vesperi expansis odoratissimis.

Root fusiform, fleshy. *Stem* erect, frutescent, appearing likely to attain a considerable height; green, or frequently red at the joints, thickly clothed with pubescence mixed with long hairs. *Leaves* hairy on both sides, on long slender footstalks; lower ones elliptically obovate, scarcely toothed, the next set terminates in a long broad elliptic lobe, which is sharply toothed, bearing numerous unequal linear sharp lobes on the lower part, some divaricately spreading, others hooked: upper ones unequally pinnatifid, large and small lobes mixed, some of which are lanceolate, spreading, and toothed, others more or less hooked or incurved, and others shorter, smaller, linear and sharp-pointed, the footstalk winged all the way between the leaflets, hairy on both sides, furrowed on the upper side, and rounded below. *Ovarium* tetragonal, pubescent, 4-winged; wings spreading, fleshy, terminating in a blunt end in the centre. *Flower* large, white, spreading widely open: *tube* about 4 inches and a

half in length, quadrangular, pubescent. *Calyx* of 4 sepals, generally connected by pairs towards the points. *Petals* 4, very broad, closely imbricate, spreading flat when expanded, rounded, and crenulate at the edges. *Stamens* 8; *anthers* narrowly linear, attached by their back to the filaments; *pollen* yellow, stringy: *filaments* inserted in the mouth of the calyx. *Style* inserted on the ovarium, extending beyond the flower, smooth. *Stigma* 4-cleft, the lobes long, spreading, cylindrical.

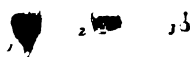
This plant is a great acquisition to showy border flowers, it being, in our opinion, one of the most elegant of the species of *Oenothera*; and it will no doubt turn out to be perfectly hardy, at least equally so with the *Argemone grandiflora*; but should it be found not to stand our climate in the open border as a perennial, it will, at least, form a showy border annual, as it flowers very early, the first year, from seed. The seed, if sown early in Spring, on a hot-bed, and if the plants are planted out in the open border in April, they will flower in June. It is a native of Chiloe, from whence seeds were sent to Mr. Page, along with bulbs of *Habranthus roseus*, No. 107 of the present Number, by Lieutenant Barlow, in 1828.

The species appears to be intermediate between *Oenothera taraxacifolia*, and *O. acaulis*; from which it differs in its more upright habit, and in the leaves being more unequally lobed.

The generic name is said to be derived from οἶνος, wine, and ἔρω, to hunt; because the roots of *Oenothera biennis* are said to be eaten after meals, and are incentives to wine drinking, as olives are.



1. Calyx, shewing the insertion of the Stamens. 2. Style, and 4-lobed Stigma.



ANDROSACE carinata.

Keeled-leaved Androsace.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. PRIMULACEÆ. *Brown prodr.* 1. p. 427.

ANDROSACE. *Calyx* 5-fidus persistens. *Corolla* hypocrateriformis 5-loba, fauce coarctatâ glandulosâ. *Stamina* 5. *Stigma* 1. *Capsula* 1-locularis, ovato-globosa, 5-fariam dehiscens; polysperma.—*Plantulæ cæspitiosæ, dense foliosæ. Flores umbellati; scapi numerosi.*

A. carinata, foliis congestis ovato-lanceolatis acutis supra carinatis ciliatis, scapo villosa, umbellis plurifloris, calycibus obtusis corolla brevioribus. *Androsace carinata.* *Torrey in the Ann. of the Lyc. of New York.* 1. t. 3. f. 1. *Spreng. syst.* v. 4. pars. 2. cur. post. p. 57. *Swt. hort. brit. ed.* 2. add. p. 595.

Plant densely tufted: stems red when in flower, an inch and a half in height, including the flower-stem. *Leaves* crowded, ovately-lanceolate, acute, keeled on the upper side, fringed at the margins, smooth on both sides, of a glossy green on the upper side, and sometimes tinged with purple underneath. *Scape* three-fourths of an inch in height, thickly clothed with villous hairs. *Umbels* in our plant generally 6-flowered. *Involucre* of 5 or 6 leaflets, which are oblongly ovate, obtuse, villously hairy, concave on the inner side. *Pedicles* short, villous, bracteate at the base. *Flowers* white, yellow at the mouth, very sweet-scented. *Calyx* 5-cleft, nearly to the base, persistent: *segments* oblongly ovate, bluntish, hollow above, villously hairy. *Corolla* funnel-formed: *tube* ovate, contracted at the mouth: *limb* spreading, flat, the segments ovate, rounded at the ends, distinct, not imbricate, white nearly to the base, which is yellow. *Stamens* 5, inserted in the tube. *Ovarium* broadly top-shaped, flattened at the top, of a smooth glossy green. *Style* smooth, included in the tube. *Stigma* a small head.

This elegant little plant is a native of North America, on the rocky mountains, where it was first discovered by Dr. James, and since by Mr. Drummond, who collected seeds of it, a part of which was presented by him to the Royal Botanical Garden at Edinburgh, in 1828, under the name of *Androsace chamæjasme*, from whence the plant from which our drawing was taken was brought by Mr. George Don, from Mr. M'Nab, to Mr. Anderson, of the Apothecaries' Garden, Chelsea, with whom it flowered in April last. The plant certainly very much resembles the European species *Androsace chamæjasme*, and *A. villosa*, but is distinguished from these especially in the flowers being almost sessile upon the top of the peduncle, while in them the pedicles are longer than the involucre; the leaves, too, seem longer in the present plant, and lanceolate rather than ovate. Its culture is the same as that for other Alpine plants, to be grown in small pots, well drained with sherds, in a mixture of peat and sand, and placed in a cold frame during Winter; and it is easily increased by dividing the plant at the root in Spring, or by sowing the seeds, which sometimes ripen.

The generic name is derived from *ανηρ ανδρως*, a man, and *σας*, a buckler; the large round hollowed leaf of *Androsace maxima* has been compared to the buckler of the ancients.



1. Calyx. 2. Tube of the Corolla spread open, to show the insertion of the Stamens.
3. Ovarium crowned by the filiform Style and minute capitate Stigma.







HABRANTHUS roseus.

Rose-coloured Habranthus.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo III. HIPPEASTRÆ. Scapus cavus. Tubi faux arcata. Semina testa nigra. *W. Herbert Bot. mag. vol. 52. 2606. p. III.*

HABRANTHUS. *Perianthium* declinatum, infundibuliforme, sub sole patentior. *Filamenta* pariter ad faucem tubi inserta, declinata, recurvata, fasciculata : quaternâ longitudinis discrepantiâ. *Antheræ* incumbentes. *Stigma* trifidum. *W. Herbert Bot. mag. loc. cit.*

H. roseus, foliis anguste linearibus glaucis obtusiusculis supra canaliculatis pedem longis 2 lineas latis scapo longior, scapo subcompresso profunde sulcato, spatha uniflora apice longe attenuata pedunculo longitudine, pedunculi profunde sulcati, perianthium campanulatum patente.

Bulb ovate, subpyramidal, clothed with a dark brown membranaceous scaly covering, which sheaths the leaves, nearly an inch above the bulb. *Leaves* 3, in our specimen, elongately and narrowly linear, bluntish at the point, glaucous, deeply channelled on the upper side, about a foot in length, and 2 lines broad. *Scape* erect, somewhat compressed, deeply furrowed, 7 inches in height in our plant, which was probably owing to its having been flowered in the greenhouse ; and there is no doubt but it is quite hardy. *Spathe* very narrow, and tapering to a long slender point, about the length of the peduncle, 1-flowered. *Peduncle* deeply furrowed. *Ovarium* below the flower, 3-celled, 3-valved, apparently few-seeded. *Flower* campanulate, spreading, of a beautiful rose-colour, slightly striped with darker lines ; upper segment narrow, acute, the 2 upper side ones broader, and the 3 lower ones again narrower. *Stamens* 6, of various lengths, inserted in the mouth of the tube, 2 very long, and ascending at the points, 2 a little shorter, also ascending,

and 2 still shorter, but each pair nearly of equal lengths. *Anthers* 2-celled, attached by their middle to the filaments: *pollen* granular, of a golden yellow.

An elegant plant, native of Chiloe, whence bulbs were sent by Lieutenant Barlow to Mr. Page, Nurseryman, Southampton, in whose garden the plant from which our figure was taken, flowered last June. It will no doubt thrive well in a warm border, in the front of a stove, greenhouse, or wall; the bulbs to be covered with litter during Winter, to protect them from the frost. The plant can only be increased by offsets.

The name is derived from ἀβρὸς, delicate, and ἀνθος, a flower; the flowers of all the species being delicate.



1. The 6 unequal ascending Stamens. 2. Style crowned by the 3-lobed Stigma.



St. ... del.

Fl. ... Aug 1832.

ADENOPHORA intermedia.

Intermediate Adenophora.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Alph. DC. monog. Campan.*

ADENOPHORA. *Calyx* 5-fidus. *Corolla* campanulata vel infundibuliformis, apice 5-loba. *Stamina* inter se libera; filamentis erectis, membranaceis, longis, valdè ciliatis, conniventibus et quasi cohærentibus. *Nectarium* cylindricum styli basi cingens. *Stylus* sæpè exsertus, in alabaistro supernè pilosus; pilis in 10 ordinis dispositis, deindè glaber. *Stigmata* 3. *Capsula* 3-locularis, lateraliter ad basin 3-valvis dehiscens. *Semina* ovata, plùs minùsve complanata.—*Herbæ perennes, vel rarius biennes?* radicibus sæpè *edulibus* (ex Fisch.); caulibus erectis; foliis alternis vel rarius subverticillatis; radicalibus petiolatis rotundatis; caulinis sæpiùs sessilibus; superiõribus angustioribus, brevioribus: floribus racemosis vel paniculatis, terminalibus et axillaribus, pedicellatis, nutantibus; alabastris clavatis. *Alph. DC. mon. camp.*

A. intermedia, foliis radicalibus petiolatis cordatis dentatis: caulinis lanceolatis basi attenuatis serratis confertis: inferioribus breve petiolatis elliptico-lanceolatis remote serratis: superioribus sessilibus acuminatis argute serratis, floribus paniculatis nutantibus, stylo longissimo.

Adenophora intermedia. *Swt. hort. brit. edit. 2. p. 325.*

Campanula stylosæ affinis. *Hort. Gorenk. ex Rœmer et Schultes Syst. veget. vol. 5. p. 110.*

Campanula intermedia. *Rœm. et Schult. supra.*

Perennial, producing several stems from the same root, attaining, when the plant is strong, the height of 3 feet; the upper part paniculately branched, forming a panicle of numerous flowers, a foot in length: *branches* angular, striate, slender, but rigid, smooth, and glossy. *Leaves* variable, smooth, serrate, of a pale green: *root ones* on long petioles, cordate, toothed: those on the lower part of the stem on short footstalks, elliptic, or elliptically lanceolate, tapering to the base, more or less acuminate, serrated with large rather distant teeth, pennately or feather-nerved underneath, the nerves branched: *upper leaves* sessile, lanceolate, acute, serrated with small sharp teeth. *Flowers* of a pale blue, small, campanulate, scarcely half the size of those of *A. liliifolia*, drooping. *Bractes* small, broad at the base, tapering to the point. *Peduncles* short and slender, furrowed, smooth, and glossy. *Calyx* superior, deeply 5-cleft, smooth; the segments broadly lanceolate, serrate, spreading, the points slightly reflexed. *Corolla* campanulate, narrow at the base and widening upwards, of a pale blue, slightly 5-cleft; *segments* short, ovate, scarcely acute,

erect, or somewhat reflexed. *Stamens* 5; *filaments* dilated at the base, where they are densely clothed with glandular hairs, the upper part smooth and slender, inserted into the base of the anthers, which are oblong and 2-celled, bursting before the flowers are expanded. *Crown* white, truncate, cup-shaped, smooth, and glossy, surrounding the base of the style. *Ovary* below the calyx, angular, smooth, and glossy. *Style* very long, about twice the length of the flower, smooth, and slender at the base, thickening upwards, and clavate at the end, densely covered with glandular hairs. *Stigma* trifid, the points slightly reflexed.

Our drawing of this stately plant, was taken in May, 1830, from a specimen in full bloom, then 3 feet in height, at the Apothecaries' Garden at Chelsea, where Mr. W. Anderson had it marked *A. stylosa*; this we thought might be right from its long style, but when we brought home the specimen for examination, we found it would not agree in any point, and determined it to be *intermedia* of Rømer and Schultes *Systema Vegetabilium*, the only work we believe in which it is described: it is there placed between *A. liliifolia* and *A. stylosa*, the habit and foliage agreeing with the former, and the small flowers and long style with the latter. We then examined specimens of *A. stylosa* at Mr. Lambert's, and a figure in Gmelin's *Flora Sibirica*, and found we had determined right; before this we had written a full description of the plant, but no specific description or account, as we wanted a radical leaf, before we could finish it, or publish the figure; and those only appear in Spring. A friend of ours, without examining it, supposing it to be *A. stylosa*, gave the wrong specific character and account, which we have now set right. The plants of this genus, from growing so early in Spring, sometimes get hurt by the cold; a pot placed over them in cold weather will be sufficient to protect them. Introduced to Chelsea Garden in 1820; a native of Siberia.

The generic name is derived from *αδην*, a gland, and *φέρω*, to bear; in allusion to the stigma being clothed with glandular hairs.



1. Calyx. 2. Stamens, with their dilated base. 3. Ovary, with the crown above it. 4. Style, with its smooth base, and glandular upper part, terminated by the 3-cleft stigma. 5. Radical leaf. 6. A small upper one.

NOTE.—The segments of the calyx should have been serrate, in the figure.



Phytolacca

Phytolacca. L. 171.

4

RIBES sanguineum.*Red-flowered Currant.**Linnean Class and Order.* PENTANDRIA MONOGYNIA.*Natural Order.* GROSSULARIÆ. *DC. fl. fr.* (1804) 4. p. 406.

RIBES. *Calyx* 5-lobus, laciniis plus minus coloratis. *Petala* 5 parva albida lutea vel rubra. *Stamina* 5 rarissime 6: filamentis liberis. *Stylt* 1-2-3-4-fidi. *Bacca* unilocularis, receptaculis lateralibus. *Semina* arillata (an in omnibus?) oblonga subcompressa. *DC. prodr.* 3. p. 477.

Sect. III. *RIBESIA.* *Flores* racemosi semper ad minimum 4-flori. *Folia* plicativa. *Calyx* campanulatus cylindricusve. *DC. l. c.* p. 479.

R. sanguineum, foliis cordatis 3-5-lobis serratis venoso-lineatis rugosis: supra pilosis: subtus tomentosus albicantibus, racemis laxè nutantibus, floribus confertis, petalis oblongis, bracteis ovato-spathulatis longitudine pedicellorum vel paulo longioribus, ovarium glanduloso-pilosum.

Ribes sanguineum. *Pursh. flor. amer. sept. v. 1.* p. 164. *DC. prodr.* 3. p. 482. *Racem. et Schult. syst.* 5. p. 497. *Spreng. syst.* 1. p. 811. *Swt. hort. brit. edit. 2.* p. 239. *Bot. reg. t.* 1349.

A stout tall-growing branching shrub: *branches* clothed with short rough pubescence, on a glossy brown bark that is much split and cracked on the lower part of the branches. *Scales* 4, surrounding the young shoots at the base, oblong, blunt, terminated by a short mucrone, becoming at length more or less reflexed at the point, and recurved at the edges; lower one shortest, tinged with red, smooth and glossy; upper ones fringed along the edges, and of a paler colour. *Leaves* 3 to 5-lobed, serrated, or sometimes doubly serrated, with unequal teeth, hairy and rugged, on the upper side of a darkish green; underneath densely clothed with soft wool, which causes a whiteness, strongly nerved with numerous pennately arranged nerves. *Racemes* many-flowered, crowded in a close cluster at the end of the peduncle, more or less nodding, rising as the flowers become expanded. *Peduncle* not leafy, sometimes nearly double the length of the leaves; at other times not so long as the leaves, of a red colour, thickly clothed with rigid hairs, all of which are tipped with a gland. *Bractes* ovately spathulate, bluntly rounded, hollow on the upper side, thickly clothed with small glands, and fringed with glandular hairs, of a dull red colour, much longer than the pedicles when the flower first expands, but these lengthen afterwards, and they are then nearly of a length.

Pedicles glandularly hairy, and clothed with numerous small short hairs besides. *Ovarium* also densely clothed with glandular hairs. *Calyx* red, tubular, inflated at the base, also clothed with glandular hairs, and numerous little glandless ones besides: *limb* 5-cleft, spreading: *segments* ovate, bluntly rounded, darkest at the back, and paler on the upper side. *Petals* erect, obovate, very small, scarcely half the length of the segments of the calyx, lilac-coloured, inserted in the mouth of the calyx. *Stamens* 5, alternate with the petals, and inserted between them: *filaments* smooth, inserted in the back of the anther, a little above its base: *anthers* 2-lobed, bursting in front for the exclusion of the pollen. *Style* smooth, exerted beyond the petals and stamens. *Stigma* 2-lobed.

This species of *Ribes* is of great importance to the embellishment of Gardens, particularly shrubberies and clumps, it being inferior in elegance to no hardy shrub we possess. Early in Spring it is clothed with innumerable pendulous racemes of purplish-red flowers. For many years it has been known to Botanists in a dried state; but it is to that indefatigable traveller, Mr. David Douglas, that we owe the introduction of it to our Gardens. So long ago as 1787, according to Mr. Douglas, Archibald Menzies, Esq. discovered this species near Nootka Sound, on his first voyage round the world; and since, on his second voyage with the celebrated Vancouver, in various parts of North West America. According to Mr. Douglas, it is the most common species at Point George, near the confluence of Columbia River. The Horticultural Society received the seeds from whence the plants in our gardens were raised, from Mr. Douglas, in October, 1826, forwarded across the Continent of America. It is as hardy as the common currant, and is propagated by planting cuttings in the Spring, or Autumn. The plant flowers in great profusion about the end of April, and beginning of May. Mr. Douglas says, that if the bushes were planted in a soil having a portion of lime rubbish mixed with it, the blossoms would be more profuse, and the colour, probably, of a deeper tint.

Ribes is a name which was given to an acid plant, by the Arabian physicians, which is supposed to be the plant now called *Rheum Ribes*.



1. Calyx. 2. Corolla spread open, shewing the insertion of the Stamens. 3. Ovary, Style, and Stigma.



SOLDANÉLLA alpina.

Alpine Soldanella.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. PRIMULACEÆ. *Brown prodr.* p. 427.

SOLDANELLA. *Calyx* 5-partitus. *Corolla* campanulata, ore lacero multifida. *Stamina* 5, filamentis antheras adnatas sagittatas superantibus. *Stigma* 1. *Capsula* apice multivalvis. *Swt. brit. fl. gar. series I.* No. 11.

S. alpina, foliis rotundo-cordatis obsolete repando-crenulatis margine subrecurvis, scapo 2-3-floro subpubescente, laciniis calycis oblongis obtusiusculis patentibus, corolla campanulata patente, stylo incluso.

Soldanella alpina. *Linn. syst. veg.* p. 194. *Curtis. bot. mag.* t. 49. *Willd. spec. pl.* 1. p. 808. *Enum. hort. berol.* 1. p. 192. *Link enum. hort. ber.* 1. p. 158. *Jacq. aust. t.* 13. *Sturm. flor. germ. fasc.* 20. *Rœm. et Schultes syst.* v. 4. p. 132.

Soldanella Clusii. *Schmidt flor. boem.* 1. n. 148.

Root perennial, tufted, scarcely producing shoots, but throwing up numerous leaves and flower stems. *Leaves* roundly cordate, kidney-shaped or sometimes ovate and attenuated a little way down the petiole, very slightly repandly crenate, the margins slightly bent backwards, smooth and glossy, of a dark glossy green on the upper side, and paler underneath, slightly winged a little way down the petiole. *Petioles* tinged with purple, flattened on the upper side and convex below. *Scapes* erect, two or three flowered, very slightly pubescent, and hardly tinged with purple. *Flowers* nodding, of an azure blue, larger than *S. pusilla*, and more spreading. *Bractes* unequal in size, one to each pedicle, the upper one longest, pressed close to the pedicle, lanceolate, acute; the others variable in size. *Pedicles* nodding, one-flowered. *Calyx* 5-cleft, the segments oblong or broadly lanceolate, bluntish, spreading wide open, quite free from the corolla, but closing partly up again when the flower is overblown. *Corolla* bell-shaped, spreading widely open when fully expanded, divided into five main divisions, which

are cleft into numerous other linear bluntish segments, the corolla being cleft about half way down. *Stamens* 5, inserted in the throat: *filaments* broad and flattish below the anthers, attached to their back, and extending beyond them in a blue point. *Anthers* two-celled, bursting in front to discharge the pollen. *Ovarium* pyramidal, smooth. *Style* slender, rather shorter than the corolla. *Stigma* a small simple head.

An old inhabitant of our gardens, having been introduced about the middle of the 16th century. It differs from *S. montana*, by the corolla being more deeply jagged, and by the more exserted style, and from *S. minima* by its crenated leaves. It is a beautiful little plant, native of the Alps of Europe, in Germany, Switzerland, &c. flowering in April and May. As it will not live in the open border, it must be grown in a pot, in a mixture of loam, peat, and sand, the pot to be well drained with sherds. It is only to be propagated by dividing the plant at the root.

The plant from which our figure was taken, flowered in the Nursery of Mr. Pamplin, Lavender Hill, Wandsworth Road.

The generic name is a diminutive of *solidus*, a shilling; the round leaves of the species being very like pieces of money, in shape.



1. Calyx. 2. Corolla spread open, shewing the 5 lacerated divisions. 3. The base of the Corolla, shewing the insertion of the Stamens. 4. Ovary, Style, and Stigma.



J. D. Smith del.

Pub. by J. Redgway, Sep. 1892

Reed.

ORNITHOGALUM fimbriatum.

Fringed Star of Bethlehem.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELEÆ. *Brown prodr. p. 274.*

ORNITHOGALUM. *Supra fol. 42. series 2.*

O. fimbriatum, racemo subcorymboso paucifloro, pedunculis fructificantibus refractis, bracteis elongato-lanceolatis acutis pedunculis parum brevioribus, perianthii laciniis lanceolatis acutis, filamentis basi dilatatis, foliis linearibus acutis basi valde attenuatis subtus hirsutis margine fimbriatis, scapo hirsuto.

Ornithogalum fimbriatum. *Willd. nov. act. nat. cur. ber. 3. p. 420. M. B. flor. Taur. cauc. 1. p. 276. Suppl. p. 266. Schult. syst. veg. 6. p. 531. Spreng. syst. 2. p. 30.*

Bulb solitary, seldom producing any offsets. *Leaves* 5, in our plant, erect when the plant is in flower, afterwards lengthening out and spreading, linear and acute, hollow on the upper side, and convex below, the sides nearly closed in near the base, of a bluish green, and smooth on the upper side, underneath densely clothed with short rigid hairs, and fringed round the margins, longitudinally marked with numerous lines from the base to the point; those in our plant when in flower six inches and a half in length. *Scape* erect, very slightly angular, scarcely half the length of the leaves, thickly covered with very short hairs, some few of which extend even to the peduncles and bractes. *Raceme* somewhat corymbose, in our plant 8-flowered; the three lower ones nearly in a whorl, the others alternate; the part of the scape between the peduncles angular, smooth, and of a glossy green. *Bractes* membranaceous, narrow-lanceolate, tapering to a long slender point, sheathing the peduncle a great part of their length. *Peduncles* spreading, ascending at the points, a little longer than the bractes, after flowering

bent downwards, their points ascending, here and there bearing a few scattered short hairs. *Perianthium* 6-parted nearly to the base, spreading when the flower is expanded, segments lanceolate, acute, the three outer ones rather broadest, white inside, the back green, edged with a broad band of white. *Stamens* 6, inserted in the receptacle: *filaments* dilated at the base, scarcely above one third the length of the perianthium, attached to the back of the anthers. *Ovarium* acutely 6-angular, smooth. *Style* smooth, scarcely so long as the stamens. *Stigma* slightly three-lobed.

An elegant species, native of Tauria, in groves and on the edges of woods. It is nearly allied to *O. umbellatum*; but it is distinguished from that species by the fringed leaves. The plant from which our figure was taken flowered in the Nursery of Messrs. Whitley, Brames, and Milne, at Fulham; and where it continued to flower nearly all the Summer. The plant is hardy, and thrives best in a light soil. It is propagated by offsets from the old bulbs.

The generic name is derived from *ορνιθος*, a bird, and *γαλα*, milk; probably from the white flowers of most of the species; but no good explanation has been given of the name.



1. Stamens. 2. Style and Stigma.



En. by J. Hildgway. 1^o 9: 1821.

SALPIGLOSSIS Barclayana.

Mr. Barclay's Salpiglossis.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SOLANÆÆ. *Brown prodr.* 1. p. 443.

Sect. II. Corolla non plicata, regularis. Stamina didynama. Embryo leviter arcuatus. Pericarpium capsulare v. baccatum.

SALPIGLOSSIS. *Calyx* 5-angularis, 5-fidus. *Corolla* infundibuliformis, limbo 5-lobo. *Filamentum* quintum sterili inter stamina longiora. *Stylus* apice linguæformis. *Stigma* truncatum, transversum. *Capsula* ovata, 2-locularis, bivalvis: *valvis* bipartibilibus. *Dissipimentum* contrarium, utrinque placentiferum. *Semina* numerosissima, erecta, angulata, compressiuscula, truncata, extûs punctis plurimis elevatis scabra: *testa* duplex, exterior crassiuscula crustacea, interior tenuissime membranacea albumini adnata: *albumen* copiosum, carnosum. *Embryo* teres, curvatus, luteus. *Cotyledones* breves, ovales, obtusæ, hinc planæ, indè convexæ. *Radicula* cylindrica, obtusissima, cotyledonibus duplò longior centripeta. *D. Don Mss. in series I. t.* 231.

S. Barclayana, utrinque pilosa, foliis oblongis obtusis basi sub-attenuatis sinuatis, lobis obtusis: superioribus subsessilibus linearibus ciliatis utrinque glanduloso-pilosis, floribus paniculato-racemosis: lobis corollæ inferioribus multo minoribus omnibus emarginatis, lobis calycis carinatis glanduloso-glutinosus.

Salpiglossis Barclayana. *Cameron Mss.*—*Salpiglossis intermedius.* *Swt. hort. brit. edit. 2. addend. p.* 594.

Stem suffrutescent, apparently biennial, or sometimes continuing for several years, as we have seen them at Mr. Westland's Nursery, at Dorking, very hard and frutescent at the base. *Petioles* thickly clothed, as is every other part of the plant, with glandular glutinous hairs. *Leaves* very variable: lower ones on long footstalks, oblongly-oval, nearly entire, or with a blunt notch or 2 on each side: those higher up the stem oblongly-oval, tapering both to the base and point, generally producing about 4 shallow obtuse lobes on each side: *smaller leaves* lanceolate, acute,

sharper-toothed; *upper ones* linear, entire, sessile, thickly clothed with glandular hairs. *Flowers* panicled, terminated in racemes, and in the axils of the forks. *Flower-stems* glandularly glutinose. *Calyx* 5-angular, 5-cleft: segments obtuse. *Corolla* tubular, funnel-formed, abruptly attenuated downwards, of a bright brown, on a yellow ground, becoming darker by age. *Stamens* 4, didynamous, two longer than the other 2, inserted in the tube, where it begins to increase in size, with a sterile one inserted between the 2 long ones: *filaments* hairy below and smooth upwards, the upper part pale blue: inserted in the back of the anthers, a little above the base: *anthers* 2-lobed, lobes opening at the sides for the ejection of the pollen: *pollen* golden yellow. *Ovarium* smooth, pyramidal. *Style* smooth, flattened a little below the stigma, but not toothed as in *S. sinuata*. *Stigma* truncate, transverse.

The present plant is a hybrid, between *S. picta* and *S. purpurea*, raised from the seeds of the former by Mr. Cameron, formerly Gardener to the late Robert Barclay, Esq.

If the seeds of this plant are sown on a hot bed in Spring, and the plants planted out in the open border about the end of April, or beginning of May, they will be in full flower in July; or if the plants are protected from the frost, during Winter, they will survive; and in this case they will flower very early in Spring.

Our figure was taken from a plant that flowered in the Nursery of Mr. Lee, of Hammersmith.

The generic name is derived from *σαλπιγξ*, a tube, and *γλῶσσα*, a tongue; in allusion to the species having a small tongue-shaped process, or a sterile filament in the tube.



1. Calyx. 2. Corolla laid open, shewing the insertion of the Stamens. 3. Ovary, Style, and Stigma.



GANYMÈDES concolor.

Sulphur-coloured Ganymedes.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Sect. 5. *Spatha* monophylla, 1-7-flora. *Perianthium* tubulosum, petaloideum, 6-partitum, coronatum.

GANYMEDES. Supra fol. 99.

Corollæ (Perianthii) lacinia Cyclaminum more reflexæ; coronâ pendula poculiformi duplo vel plus longiores. *Genitalia* recta gracilia valde inæqualia. *Filamenta* tria tubo breviora et eo connata fere ad antheras erectas lineares: tria alia e tubo progredientia usque ad 3 lineas, et libera ultra tubum at coronâ breviora. *Stylus* coronâ longior usque 2-3 lineas et ultra, *stigmatē* trilobo exiguo pallido.—*Herbæ bulbosæ elegantes Europææ Corbulariarum foliis et habitu, at majores, et spathis 2-7-floris floribus cernuis nutantibusve, albis; sive pallidissime luteis, stramineisve, et delicatissime suaveolentibus.* Haworth supp. pl. succ. *Narcis. Revis.* p. 131.

N. concolor, 2-4-florus corollæ subnutantibus, lacinii subreflexis, corona truncata integra triplo longioribus, stylo longe exserto.

Ganymedes concolor. Haworth loc. cit. p. 131.—*Monogr. Narcissin.* p. 4. No. 2.

Narcissus juncifolius flore luteo reflexo. *Park. parad.* p. 92.

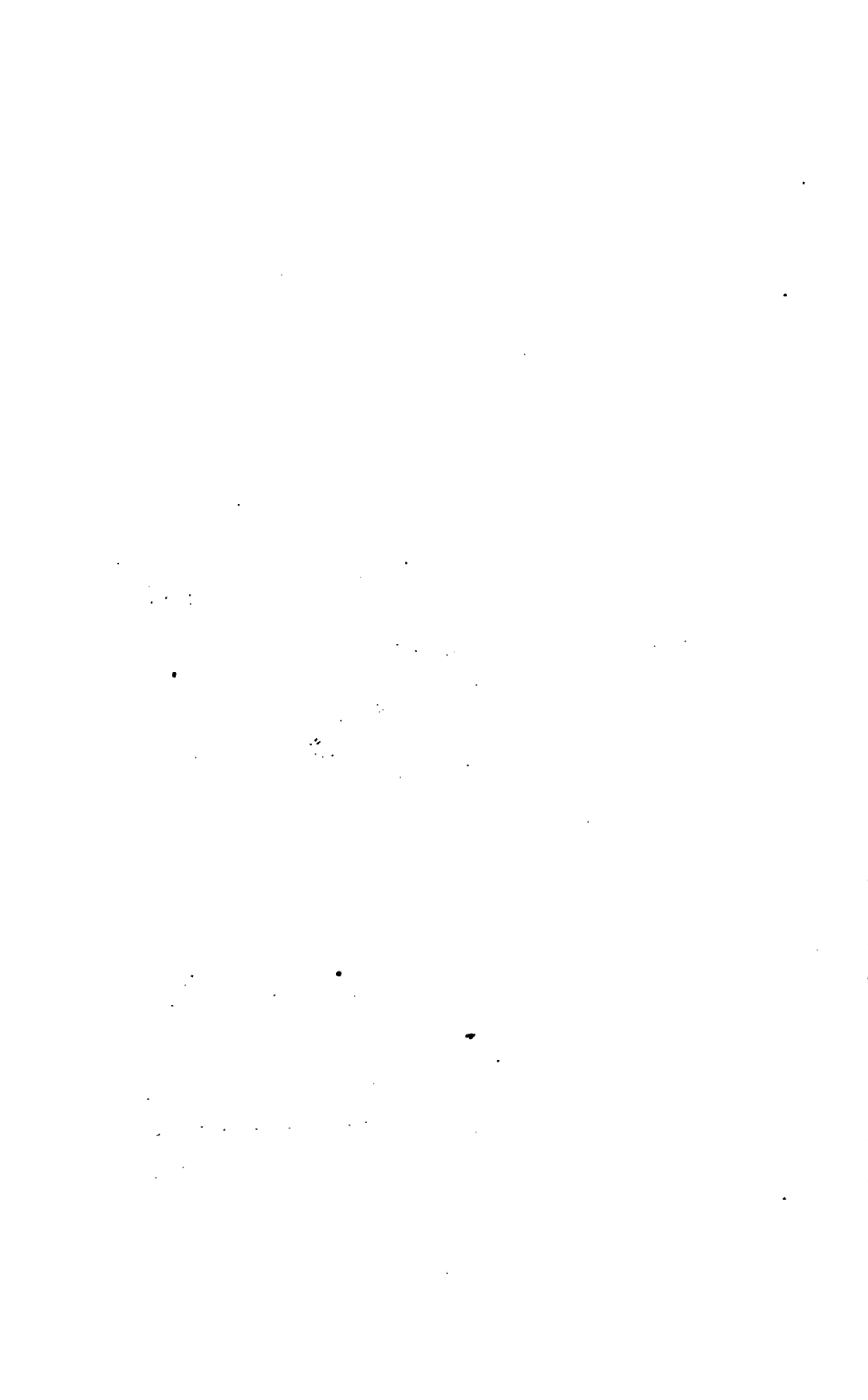
Bulb obversely top-shaped, producing a large cluster of small white fibres at the base, the upper part ending in a 2-valved membranaceous sheath, which encloses the leaves. *Leaves* succulent, very long, linear, tapering to a blunt point, deeply channelled on the upper side, owing to the sides being folded inwards, deeply furrowed with numerous furrows underneath. *Scape* shorter than the leaves, slightly angular, striate, inclining to glaucous. *Flowers* 2 to 4, nodding, of an elegant straw colour. *Sheath* membranaceous, acute, bursting on one side for the expansion of the pedicles, which it encloses at the base. *Pedicles* unequal in length, bluntly 3-sided. *Germen* smooth, bluntly 3-sided. *Perianthium* tubular, limb 6-parted, segments oblongly ovate, mucronate,

imbricate at the base, a little twisted and recurved, rather longer than the tube, of a bright straw colour. *Crown* of the same colour as the segments, truncate, more or less wavy, entire, nearly 3 times shorter than the segments. *Stamens* 6, three inserted in the mouth of the tube, and about half the length of the crown; the other 3 inserted lower down in the tube, and scarcely reaching beyond the mouth: *filaments* short and smooth: *anthers* incumbent. *Style* smooth, exserted at some distance beyond the crown. *Stigma* small, 3-lobed.

The drawing was taken from the rich Garden of the Horticultural Society at Chiswick, a few years ago. Probably, a native of the Pyrenees; thrives in light loam, and a warm situation, or near a wall; and is propagated by offsets, but is at present very rare, and flowers late in April.



1. Flower spread open, to show the insertion of the stamens. 2. A detached anther, with the upper part of its filament, which is not attached to the tube of the corolla, although its under part is, as appears by the visible line which it forms. 3. The Germen, with its attached style, ending in its small pale trilobulately rounded stigma, all magnified.





L. D. Smith. del.

Pub. by J. D. Smith. 1881.

PHLOX corymbosa.

Corymbse-flowered Lychnidea.

Natural Order. POLEMONIACEÆ. *D. Don obs. on Polemon. p. 4.*
PHLOX. Supra fol. 29 et 190.

P. corymbosa, caule erecto pubescente superne ramoso, foliis oblongo-lanceolatis acuminatis undulatis subtus pubescentibus margine scabris, corymbis paniculatis, dentibus calycinis subulatis, corollæ laciniis rotundato-obovatis.

Phlox corymbosa. *Hortulanorum.*

Perennial. *Stem* erect, in strong soil attaining the height of three or four feet, densely clothed with a short pubescence, at first 4-sided, but the lower part becoming round and smooth by age, branched with numerous short slender branches above the middle, more or less purple. *Leaves* on very short footstalks, or nearly sessile, opposite, oblongly-lanceolate, tapering to a slender point, also tapering towards the base, but rounded off at the footstalk, more or less undulate, pinnately nerved, the veins all connected within the margin, and forming arches, reticulately veined underneath and the nerves pubescent, the margins very rough. *Corymbs* terminal, panicled, the branches many-flowered. *Flowers* fragrant, of a purple lilac, with a white star at the base. *Bractes* narrowly lanceolate, tapering to a slender point. *Pedicles* short, thinly clothed with a short pubescence, purple. *Calyx* tubular, membranaceous between the teeth which are subulate, and dark purple. *Corolla* tubular, with a 5-cleft, spreading limb: tube slender, curved, more than twice the length of the laciniæ of the limb, which are spreading, broadly obovate, rounded, at first flat and imbricate, afterwards the margins become revolute, and distinct. *Stamens* 5, inserted in different parts of the tube, the points of two only exerted: *fila-*

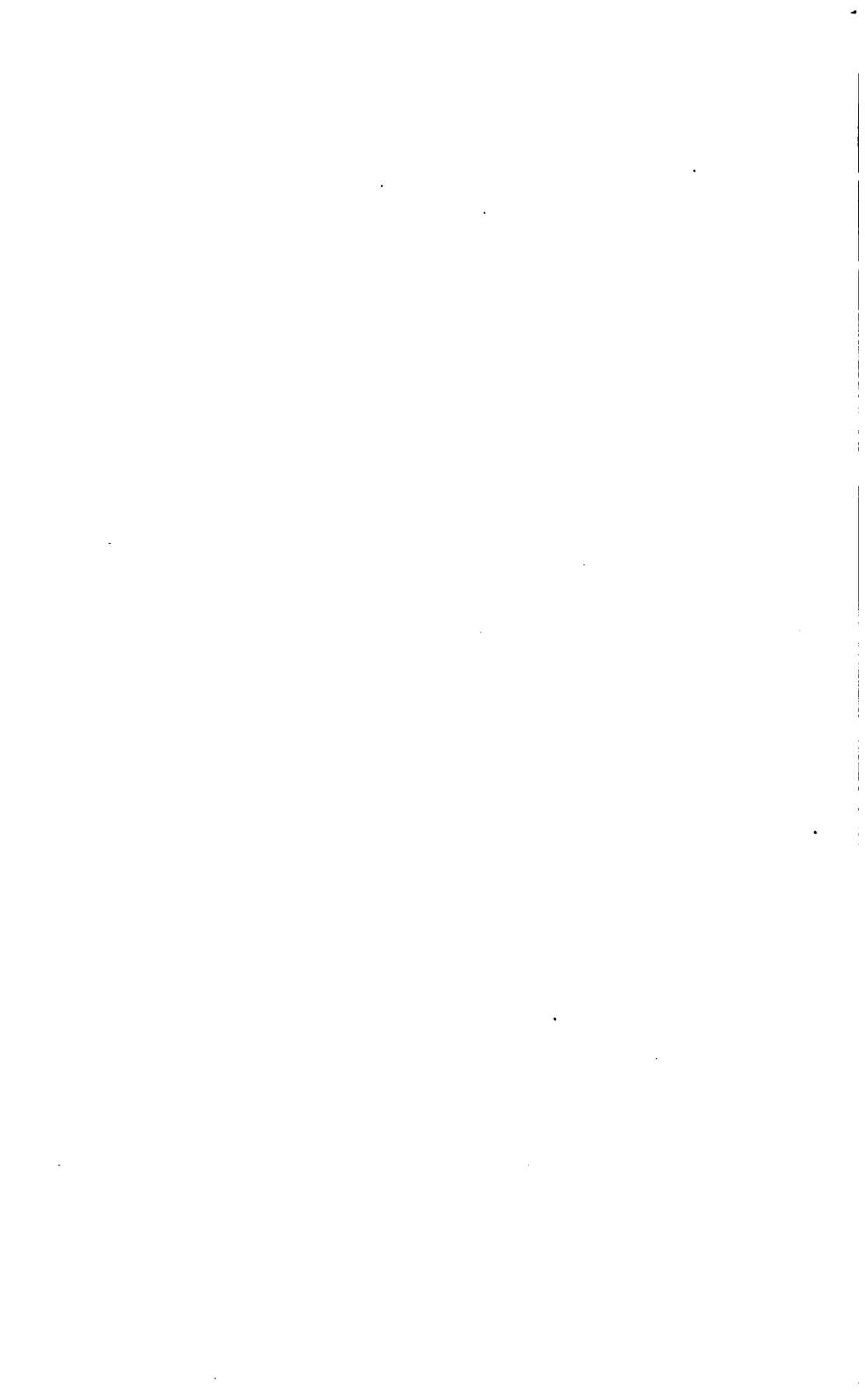
ments short and slender : *anthers* linear. *Ovarium* smooth and glossy. *Style* smooth, slightly exserted. *Stigma* trifid, the segments blunt, erect, or slightly spreading.

Our drawing was made from a specimen communicated from Mr. Barclay's rich collection, at Bury Hill, in the Summer of 1830 ; and we have also received it from the Nursery of Messrs. Young's, of Epsom. From their extensive collection of hardy shrubs and plants likewise, we ought to have stated, on page 109, that our figure of the beautiful *Ribes sanguineum* was also made.



1. Calyx. 2. The tube of the flower laid open, to shew the insertion of the stamina.
3. Ovary and style, terminating in 3 stigmas.





ORÓBUS luteus.

Yellow Bitter Vetch.

Natural Order. LEGUMINOSÆ. *DC. prodr.* 2. p. 93.

Subordo I. PAPILIONACEÆ.—Tribus IV. VICIÆ. Supra fol. 194.

OROBUS. *Calyx* campanulatus, 5-fidus, lobis 2 superioribus brevioribus. *Corolla* papilionacea. *Stamina* diadelphea. *Stylus* gracilis linearis apice villosus. *Legumen* cylindraceum oblongum 1-loculare bivalve polyspermum. *Semina* hilo lineari.—*Herbæ erectæ. Stipulæ semisagittatæ. Petioli in setam brevem simplicem desinentes. Folia abruptè pinnata paucijuga. Racemi axillares pedunculati.* *DC. prodr.* 2. p. 376.

- O. luteus*, glabriusculus, caule simplici anguloso, foliis 3-5-jugis, foliolis elliptico-lanceolatis subtùs glaucis mucronulatis, stipulis semisagittatis basi dentatis foliolis multò minoribus, pedunculis elongatis multifloris folium vix æquantibus adscendentibus, calycibus glabriusculis : dentibus inæqualibus brevibus, leguminibus compressis longitudinaliter reticulato-venosis sessilibus, seminibus globosis variegatis. *DC. prodr.* 2. p. 378.
- Orobus luteus.* *Linn. spec.* 1028. *Willd. sp. pl.* 3. p. 1073. *Pers. syn.* 2. p. 303. *Hort. Kew. ed. 2. v. 4. p. 303. Spreng. syst.* 3. p. 260.—*Gmel. sib.* 4. p. 13. t. 4.

Root perennial. *Stems* erect, simple, or two or three branches coming from the base, angular, nearly smooth, or very slightly pubescent. *Leaves* pinnate, bearing from three to five pair of leaflets; *leaflets* opposite, or rarely alternate, elliptically lanceolate, terminated in a sharp soft mucrone, reticulately veined, of a pale green, underneath slightly glaucous, the nerves slightly pubescent. *Petioles* clothed with weak spreading hairs, channelled on the upper side and keeled on the lower, terminated in a small narrow leaf-like appendage. *Stipules* semisagittate, lanceolate, taper-pointed, more or less toothed, pubescent. *Racemes* several-flowered. *Flowers* from orange to a pale straw-colour. *Peduncle* about the length of the leaf, nearly smooth, angular. *Pedicles* short, nodding. *Calyx* campanulate, slightly pubescent; *laciniæ* very unequal, two upper ones very short, and curved inwards

towards each other, the three lower ones lanceolate, taper-pointed, about the length of the tube. *Vexillum* oblongly obovate, channelled on the upper side, and keeled underneath. *Wings* shorter than the vexillum, on long slender ungues, auriculate on one side, the ears very large, and curved inwards. *Keel* acute, sharply keeled. *Stamens* 10, diadelphous, nine joined more than half their length, the points slender and distinct, the other distinct its whole length. *Ovary* clothed with long weak hairs. *Style* slender, smooth below, and villous on the inside, on the upper part.

Our drawing was made from a plant in Chelsea Physic Garden, in the month of June, 1830, communicated to that fine collection by Dr. Fischer, Superintendant of the Imperial Botanic Gardens of St. Petersburg, in the year 1818. It is perennial, and increased by seeds, or parting the roots in Autumn, after flowering, or in Spring, in the usual manner.



1. Calyx. 2. Vexillum. 3. The two wings. 4. A front view of the keel. 5. A side view of the same. 6. The united stamens laid open, with the disunited stamens near them. 7. The young seed pod terminated by its style.



TULIPA Bonorotiana.

Bonorata Tulip.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. TULIPACEÆ. *Kth. Synops.* 1. p. 292.

TULIPA. *Supra folio* 102.

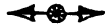
T. Bonorotiana, caule pubescente foliis longiore, perianthio campanulato-patulo; segmentis elliptico-lanceolatis acutis apice barbatis margine involutis: macula basi rhombæ parva.

Tulipa Bonorotiana. *Bertolon. in litt. ad Schultz. Reboul. nonn. spec. Tul. not. p. 7. Schult. syst. veg. v. 7. p. 375.*

Root bulbous, broad at the base, where it terminates in a dense tuft of small fibres, tapering upwards, smooth, clothed with a thin torn brown membrane. *Scape* leafy, roughly pubescent, being densely clothed with short rigid hairs, longer than those on the leaves, by which it differs from *T. stragulata*, a species we unluckily let pass without notice, though we were in time to recognise it by its character. *Leaves* variable in size, of a glaucous green, the lower ones very broad, and beautifully undulated, shortly fringed with short stiff hairs: stem ones much narrower, attenuated to the base, and clasping the stem, attenuated to a long taper point, densely covered with short stiff hairs, deeply channelled on the upper side, and keeled below, striated with numerous prominent longitudinal lines. *Flower* campanulately spreading, when in bloom of an exquisite faint scent, inside of a vivid brick colour, not much shining, outside of a very pale yellow marked with red: *Interior segments* marked longitudinally down the centre with two lines of yellow; all the segments densely bearded with a bunch of wool at the end. *Spots* at the base of each segment of a vivid blue: outer segments smaller and narrower than the inner ones. *Ovarium* superior, of a considerable length, acute 3-angled, and ribbed up the centre of each valve, clothed with short wool. *Stigma*

sessile, large, and spreading, 3-lobed, lobes very large and spreading, densely covered with thick hairs on all sides, beautifully crested, and reflexed, the margins also reflexed.

Our figure was taken from the rich collection in Chelsea Physic Garden. We detected it amongst a number of other Tulips, the roots of which were sent to the Honourable Company of Apothecaries, of London, from abroad, as *Colchicums*; which, on Mr. Anderson's planting them in their Garden at Chelsea, produced the flowers of several species of Tulipa. It is ornamental, and of easy culture, by parting the bulbs, when quiescent, in the usual way.



1. Stamen.
2. The 3-sided Ovarium, terminated by its large 3-lobed crested Stigma.
3. Bulb.



RHODODÉNDRON pulchrum.

Pretty Rhododendron.

Linnean Class & Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICEÆ. *D. Don prodr. fl. nep. p. 148.*

Subordo III. RHODORACEÆ. D. Don loc. cit. p. 152.

RHODODENDRON. *Supra folio 10. series 2.*

Sect. III. TSUTSUSI. Flores terminales, 1-3. Calyx 5-partitus: segmentis longis erectis angustis acutis. Corolla tubulosa, rotata, 5-partita: segmentis patentibus. Stamina 10, inæqualia adscendentia aut sub-erecta.—Frutices erecti aut patentes ramosi, sempervirentes aut sub-decidui: ramis virgatis, junioribus pilosis. Folia hirsuto-strigosa. Flores terminales subsolitarii aut gemini.

R. pulchrum, floribus 2-3 terminalibus, calyce erecto 5-partito hirsutissimo: segmentis lineari-subulatis, staminibus subadscendentibus, stylo multo brevioribus, foliis ellipticis acutis.

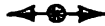
Rhododendron indicum γ *Smithii. Swt. hort. brit. ed. 2. p. 343.*

A handsome stout branching shrub: *branches* spreading, densely clothed with glossy ferruginous hairs, close pressed upwards to the stem. *Leaves* elliptic, acute, tapering to the base, thickly clothed on the lower side with long ferruginous hairs, all bending inwards, very much crowded on the nerves and veins; feather-nerved and reticulately veined; upper side less clothed with hairs, which are white, and nearly prostrate, all pointing to the end of the leaf. *Petioles* rather short, channelled a little on the upper side, and rounded below, thickly clothed with ferruginous hairs, close pressed to the stem. *Flowers* 2 to 3, terminal. *Peduncles* clothed with feathered long white hairs, which give them a singular appearance, not half the length of the leaves. *Calyx* deeply 5-parted, nearly to the base; the segments erect, very long, linear at the base, and terminating in a long subulate point, thickly clothed and fringed with long, spreading, feathered hairs. *Corolla* very large and handsome, above 2 inches in

length, and about 3 in width, when expanded ; of a bright rosy purple, spotted on the inside with bright red spots ; *tube* about three fourths of an inch in length, strongly but bluntly 5-angled : *limb* 5-cleft, spreading ; the two upper segments largest and broadest, ovate, rounded at the ends, spotted from about the middle, and a good way down the tube, with bright red spots : lower segments elliptical or oval, rounded at the ends, not spotted. *Stamens* 10, unequal, a little ascending : *filaments* rosy, clothed about half way up with short pellucid hairs : *anthers* opening by two holes at the point, for the exclusion of the pollen : *pollen* white. *Ovary* densely clothed with long white close-pressed hairs. *Style* quite smooth, considerably longer than the stamens, rose-coloured. *Stigma* a red glossy rugulose head.

This elegant mule Rhododendron is the produce of *R. ledifolium*, of Hooker, impregnated by the pollen of the Old Red *R. indicum*. It was raised from the seed of the former species by Mr. Smith, of Coombe Wood, Kingston, about four years ago, along with several other hybrids of the same genus, which Mr. Smith thinks will all flower in the next Spring.

The shrub thrives best in sandy peat, mixed with a little light loam ; and cuttings, taken from young wood, root freely, planted in sand, with a bell glass placed over them. The plant requires protection in Winter.



1. Pedicel and Calyx, showing the six divisions. 2. A filament, with its anther.
3. Ovary, style, and stigma.



HERMIONE Trewiana.

Trew's Hermione.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Sect. I. *Radix bulbosa.* *Flores* spathacei, umbellati, raro solitarii.

HERMIONE. *Spatha* 1-multiflora. *Perianthii segmentis* in stellam patentes; coronâ parvâ caliciformi 3-5-plo longiores. *Tubus* gracilis angulato-cylindricus corollæ laciniis longior, viridis. *Filamenta* toto tubo adnata apice solum semilineam libera; tria tubo longe breviora, tria ejus longitudine. *Antheræ* parvulæ trigono-ovatæ erectæ, tres tubo inclusæ, tres cum semisuperantes. *Stylus* rectus inclusus. *Stigma* plus minus trilobato-trifidum, lobis rotundatis. *Supra folio* 92. *Haworth in Narc. Revis. in supp. plant. succ.* p. 137.

Tribus II. **TAZZETTA.** *Folia* lorato-sublinearia obtusa viridescens, glauca v. glaucescentia. *Scapi* elevato-striati multiflori. *Tubus* angulato-cylindricus raro semicylindricus (*H. fistulosa*), elongatus. *Corona* cyathiformis v. cupularis aut rotata, integra plus minusve lacera, lobata aut crenulata. *Sect. I.* *Floribus albis, segmentis perianthii ovatis ellipticisve obtusis aut acutis sæpissime mucronulatis.*

H. Trewiana, umbellis plurifloris, perianthii segmentis ovatis apice breve mucronulatis cum prima florentia imbricata posteriora subreflexo-tortuosa, corona patula pollubrifloris lobatim-crenulata subplicatula lutea.

NARCISSUS Trewianus, foliis lineari-loratis carinatis, scapo tereti-ancipiti striato, pedicellis spatha sub-longioribus, corollæ tubo germinæ 3-plo longiore, corona laciniis sub-duplo brevior, campanulato-rotata plicato-corrugata obsolete trilobo-repanda, margine inæquabiliter fissa, subdentato-erosula. *Ker Botan. magaz. fol.* 1298, *in emendanda.*

Narcissus orientalis a. Botan. magaz. t. 940.

Hermione grandiflora. Haworth in. supp. plant. succ. p. 141.

Narcissus grandiflorus. Haw. in Synops. pl. succ. app. p. 332.

Hermione crenularis. Salisb. in hort. trans. v. 1. p. 263. *excl. syn. Haw.*

Bazelman major. Trew flor. imag. 1. t. 23.

N. latifolius byzantinus major luteus. II. Clus. hist. 1. p. 154.

N. anglicus polyanthos. Park. parad. terr. 82. t. 81. *f.* 6.

N. polyanthos major albus calyce medio croceo-luteo. Rudb. elys. t. 60. *f.* 6.

Bulb rounder than in other related species, clothed with irregular brown shelly scales. *Sheath*, surrounding the leaves, striate, higher on one side than the other, in which it differs from *H. obtusifolia*, a nearly related, but very different species. *Leaves* from 2 to 4, or from 6 to 8 inches long when not forced, but much longer when forced; three fourths of an inch broad at the base, tapering upwards, and ending

in rather a bluntish point, but more acute than most of the related species; furrowed on the upper side and keeled below, longitudinally striated, somewhat glaucescent. *Scape* in plants, not forced, longer than the leaves, very stout and succulent, solid below, but hollow from about the middle, roundly subcompressed, with a sharp angle on each side, and striated longitudinally with numerous prominent lines, a little glaucescent or mealy. *Spathe* ovate, acute, membranaceous, striated, not half the length of the front peduncles, but about even with the back ones. *Umbels* 4 to 8-flowered, most frequently 6-flowered; pedicels acutely 3-angled, flat at the back, the upper angle rather inconspicuous, so as to make them subsemicylindrical, longitudinally striated with several lines; front ones 4 inches in length; back ones 2 inches, all more or less varying in height from the two extremes. *Ovarium* ovate, acutely 3-sided. *Tube* of the flower bluntly triangular, with a longitudinal line on each side between the angles, about half as long again as the segments of the limb. *Segments* ovate, tapering to the base, white, every other one terminated by a short mucrone, the others ending in a small callosity: when first expanded, flat and closely imbricate; at length becoming more or less twisted. *Crown* about one fourth of an inch in height, nearly three fourths of an inch across, basin-formed, rugulose, and crenulated at the margin, of a golden yellow. *Stamens* 6, inserted in the mouth of the tube; 3 extending beyond it, and 3 equal to it: *filaments* very short, inserted about the centre of the back of the anthers. *Style* smooth, flat, and slightly furrowed on 2 sides. *Stigma* of 3 short rounded lobes, slightly reflexed at the points, and pustulose. *Ovula* numerous, the seeds obovate, smooth.

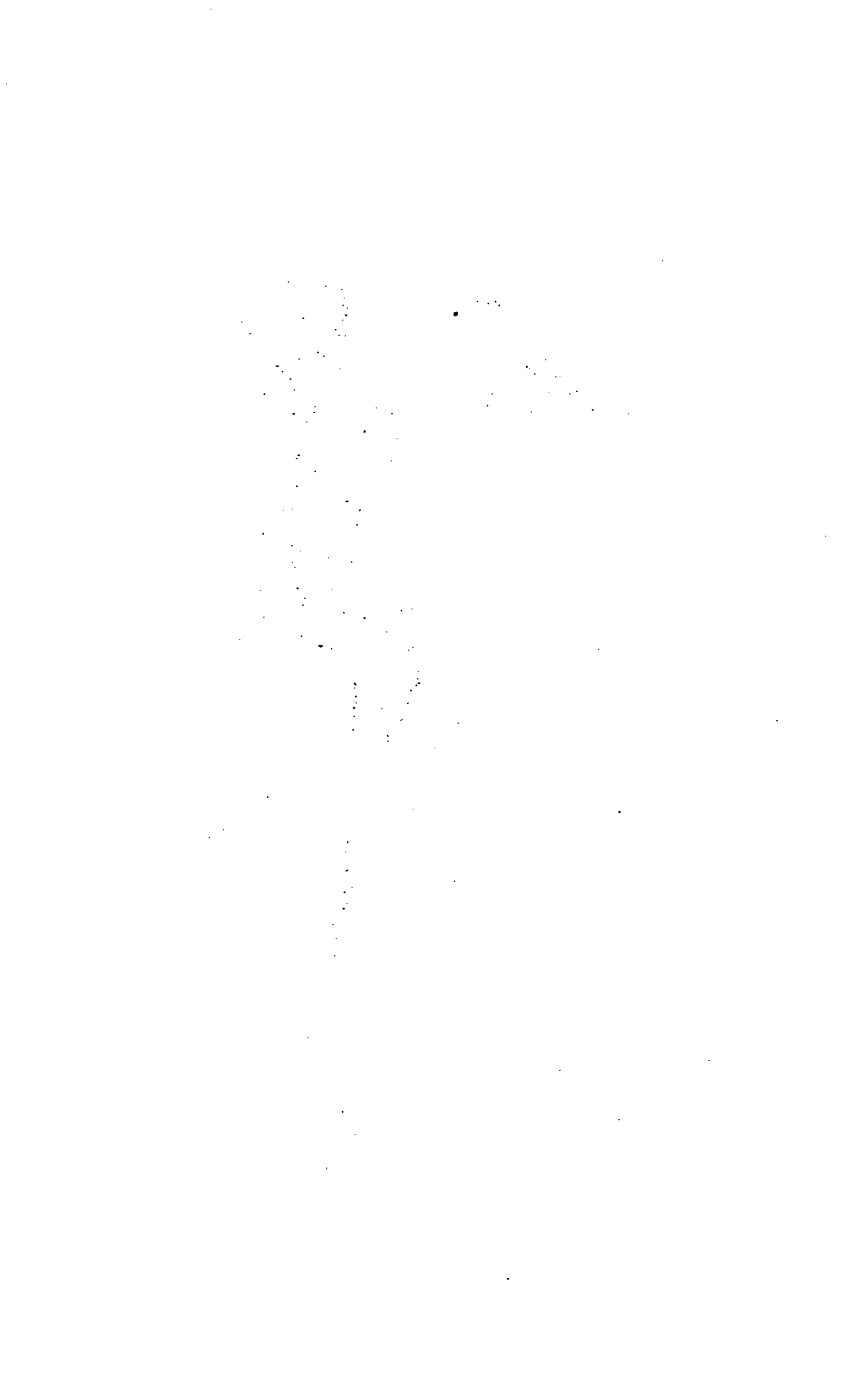
It is impossible that the present species can produce seed of itself without assistance, as the stigma is so far below the stamens, that the pollen cannot come in contact with it; most probably this is effected by insects in its natural habitats.

Our drawing was made from a bulb received from Mr. Charlwood, Seedsman, Covent Garden, which flowered in our Garden, at Chelsea, last Spring.

The generic name is from Hermione, the daughter of Menelaus and Helena.



1. The tube of the flower laid open, to show the insertion of the stamina. 2. The ovary, with its style and 3-lobed stigma.







PHILADELPHUS hirsutus.

Hairy Syringa.

Linnean Class and Order. ICOSANDRIA MONOGYNIA.

Natural Order. PHILADELPHÆE. *Calyx* turbinatus, limbo 4-fido (raro 5-fido), persistens. *Petala* 4 (raro 5), calycinis laciniis alterna, in æstivatione convoluto-imbricata. *Stamina* 20-40, duplici serie disposita, fauci calycinæ inserta. *Styli* 4, raro 5 infernè sæpius coaliti. *Stigmata* longa, divaricata, obtusa, latere interiore puberula, nunc spiraliter torta. *Capula* semi-infera, subliguosa, 4 (raro 5)-locularis, polysperma, apice quadrifariam loculicido-dehiscens. *Semina* scobiformia, subulata, lævia, angulis placentæ tetragonæ cumulatim adnata, arillo laxo membranaceo, ad umbilicum foramine fimbriâ laceratâ aperto, nucleo seminis triplò longiore instructa: *testa* tenuissima, membranacea, nucleum arcuè vestiens: *albumen* ovoideum, carnosum, album. *Embryo* inversus, lacteus, ferè albuminis longitudine: *cotyledones* ovales, obtusæ, planiusculæ: *radicula* tere-tiuscula, cotyledonibus plurimùm longior, supera, recta, obtusa.—Frutices (Europæ, Asiæ, et Americæ temperatis communes) *erecti, decidui*. Folia *opposita, nervosa, dentata, impunctata*. Flores *oppositè axillares, terminales, subracemosi, albi*. D. Don's observations on Philadelphæe and Granatæe, in the Edinburgh New Philosophical Journal, 1826, p. 133.

PHILADELPHUS. *Calyx* 4-5-fidus. *Petala* 4-5. *Filamenta* simplicia. *Styli* 4-5, sæpè coaliti. *Capula* 4-5-locularis, polysperma. *Semina* arillata.

P. hirsutus, foliis ovatis acutis subquinque-nerviis acutè denticulatis subtus canescenti-villosis reticulato-venosis, floribus terminalibus subternis, stylis stigmatibusque coalitis.

Philadelphus hirsutus. *Nuttall gen. amer.* 1. p. 301. *Decand. prod.* 3. p. 206.

A handsome little shrub, with numerous short slender branches; the plants that we have seen, about 4 or 5 feet high; *branches* roughish and hairy when young. *Leaves* on short footstalks, ovate, or ovate-oblong, acute, sometimes shortly acuminate, more or less furnished with short sharp teeth, triply nerved with two lateral branches, more or less distinct, and reticulately veined, thickly clothed underneath with a shaggy hoary pubescence; the upper side hairy

when young, afterwards becoming almost smooth. *Petioles* short, furrowed on the upper side and rounded on the lower, rough and pubescent. *Flowers* frequently in threes, terminal, large and white, generally 4-petaled, but sometimes increased to 5 or 6. *Peduncle* short, warted, thickened upwards. *Bractes* small, setaceous, inserted just below the base of the ovarium, deciduous. *Calyx* 4-cleft, or rarely 5-cleft; the laciniae ovate, lanceolate, taper-pointed, spreading, clothed with close-pressed hairs. *Petals* 4, or sometimes increased to 5 or 6, inserted in the calyx, alternate with the laciniae, ovate, rather acute, spreading. *Stamens* above 50, inserted in the calyx and base of the petals, in a double series, unequal in length: *pollen* yellow. *Ovarium* half inferior, the lower part enclosed in the tubular part of the calyx. *Styles* frequently 4, sometimes 5 or 6, connected together. *Stigmas* 4 to 6, spatulate, extending beyond the anthers, connected together.

This interesting species was detected on the banks of the French broad river, Tennessee, near the Warm Springs, by Mr. Nuttall, who has given a description of it in his valuable work on the genera of North American Plants. There is a variety of this cultivated in the gardens, under the name of *gracilis*, whose distinction is made to consist in the leaves being 3-nerved, but the number of nerves is a character of no importance in this genus. The plant succeeds well in the common garden soil, and it is readily propagated by cuttings.

Our drawing was taken from a plant which flowered in the Nursery of Messrs. Whitley, Brames, and Milne, Fulham.

Philadelphus from *φιλadelphος*, the name of a shrub mentioned by Athenæus, and first applied to the present genus by Caspar Bauhin.



1. The calyx in front, with the ovary; style and stigmas in their natural situations.
2. The stamens spread open. 3. A detached petal.



MÁLVA Miniàta.

Vermilion-flowered Mallow.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. MALVACEÆ. *Brown cougo*, p. 8. *Kunth diss.* 1822. p. 1. *DC. prod.* 1. p. 429. *Malvaceæ. Sections* 1-2-3. *Juss. gen.* 271.

Div. I. Calyx duplex seu involucri cinctus. *DC. prod.* 1. p. 429.

MALVA. Calyx cinctus involucri 3-phyllo rarius 5-6-phyllo; bracteolis oblongis setaceisve. Carpella capsularia plurima in orbem disposita. *DC. prod.* 1. p. 430.

§. 7. *Multifloræ; floribus purpurascens, miniatis aut albis, pedunculis axillaribus multifloris, involucello 3-phyllo, foliis angulatis.*

M. miniata; fruticulosa; foliis ovato-cordatis trilobis irregulariter crenato-lobatis tomentosis; pedunculis axillaribus racemosis sub-quinquefloris, floribus secundis.

M. miniata. Cav. icon. 3. t. 278. *DC. prod.* 1. p. 435.

A suffrutescent, much branched, upright plant, about three or four feet high; *branches* upright, smooth at the base, but beset with white soft stellate tomentum towards the top. *Leaves* ovate, somewhat cordate at the base, slightly 3-lobed, the middle lobe much elongated, all obtuse and lobately-crenate, white from stellate tomentum beneath, as well as the petioles, greenish on the upper surface, and covered with minute stellate pubescence. *Stipules* lanceolate, subulate, one on each side of the petiole at the base. *Peduncles* axillary, usually about equal in length to the leaves, and generally bearing about five flowers each, beset with stellate tomentum. *Flowers* all leaning to one side of the peduncle, which is usually terminated by a small leaf, about the size of those of *M. limensis*; of a vermilion colour, on very short pedicels. *Involucrum* of three very narrow linear tomentous leaflets, which are shorter than the calyx.

Calyx clothed with white stellate tomentum, 5-lobed, the lobes ovate, triangular, and acute. *Petals* cuneiform, unguiculate, slightly denticulated at the apex; the claws thick and narrow, of a purplish colour, and the limbs of a vermillion colour. *Stamens* numerous, monadelphous, the column pilose. *Anthers* purplish, bursting by one cell; *pollen* yellow. *Style* crowned by numerous stigmas.

This elegant species of Mallow appears to have been introduced to our gardens as early as the year 1798, but its native country is still unknown. It is supposed to be a native of Chili. Being a late flowering plant, it is of great importance to the decoration of flower borders and shrubberies in the months of October and November, at which time it is profusely clothed with fine vermillion coloured blossoms; but as the plant is apt to die in severe winters, if left without protection, it therefore should be sheltered by the haulm of other herbage at that season, or by covering it with a mat.

It may either be increased by cuttings, planted under a hand-glass, or by seeds, which sometimes ripen in this country.

Our figure was taken from a fine plant that flowered in the Nursery of Messrs. Allan and Rogers, at Battersea.

The generic name is said to be altered by the Latins, from the Greek word *μαλαχη*, soft, which comes from *μαλασσω*, to soften; in reference to the soft mucilaginous qualities of the species.



1. Calyx, shewing the 5 lobes, and the 3 linear leaflets of the involucre. 2. Stamens, and pilose column. 3. Ovary, style, and numerous stigmas.



PHYCÉLLA Ígnea. var. pulchra.

Miss Reinagle's Chile Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 293.

PHYCELLA. *Perianthium* subringens, convoluto-clausum, 6-partitum: tubo brevissimo. *Stamina* 6, declinata, fauci tubi inserta: *alternis* brevioribus; nunc basi appendiculata, nunc intra annulum fimbriatum inserta, nunc appendicibus annuloque destituta. *Stylus* declinatus. *Stigma* simplex, incrassatum. *Capsula* trilocularis, polysperma, seminibus atris, planis, membranaceis.—*Plantæ bulbosæ America australis temperatæ, floribus rubris purpureisve, integumentis bulborum atris.* Lindl. in Bot. Reg. t. 1341.

P ignea, umbellâ multiflorâ, perianthii recti segmentis limbo ovatis apiculatis, processibus stamineis plerumque elongatis subulatis. *D. Don Mss.* *Phycella ignea.* Lindl. l. c. t. 928, in textûs notâ. *Herbert in Bot. Mag.* t. 2687.

Amaryllis ignea. Lindl. l. c. t. 809.

Bulbus ovatus, induviatus, atrofuscus, *ovi gallinæ* magnitudine, collo abbreviato, truncato. *Folia* plura, disticha, recurvato-patula, lineari-lorata, obtusissima, glauco-viridia, pruinosa, suprâ concaviuscula, subtùs leviter sulcata, margine obtuso; spithamæa v. pedalia, vix semunciam lata, plantâ deflorescenti, longitudine increscenti sæpè demùm cubitalia. *Scapus* pedalis, et ultrâ, erectus, teres, fistulosus, levitèr sulcatus, infernè purpurascens, calamo scriptorio dimidio crassior. *Umbella* multi (6-9)-flora. *Spatha* diphylla: *foliolis* oblongo-lanceolatis, obtusis, concavis, nervosis, obliquè carinatis, membranaceis, marcescentibus, albo-virescentibus. *Flores* cernui. *Pedunculi* obtusè trigoni, plerumque bipollicares et ultrâ, bracteis plurimis linearibus obtusis scariosis interincti. *Perianthium* hexapetaloideo-partitum, convolutotubulosum, sesquiunciale, rubrum: *tubus* basi coarctatus, obsoletè trigonus, luteo-virens, intùs copiosè nectariferus: *limbo* parùm obliquo: *segmentis* lineari-spathulatis, canaliculatis, nervosis, mucronulo abrupto calloso tuberculiformi apiculatis: *laminâ* apice ovatâ recurvato-patenti; *interioribus* 3, muticis, vix longioribus: *supremo* majori. *Stamina* 6, tubo

perianthii adnata, declinata ; 3 segmentis perianthii exterioribus opposita, paullo breviora : *filamenta* subcompressa, glabra, apicibus incurvatis, perianthio concoloribus, basibus magis dilatatis, confluentibus, et faucem ipsam perianthii tubi ferè omninò claudentibus, processibus plerumque elongatis subulatis erectis interjectis. *Antheræ* biloculares, incumbentes, versatiles, pollen farinaceum aureum turgentes. *Ovarium* trigonum, virens, triloculare : *ovulis* confertis, biserialibus. *Stylus* filiformis, glaber, apice triqueter. *Stigma* exsertum, levissimè trilobum, disco concaviusculum, minutè papillosum, atropurpureum. *Capsula* trilocularis, polysperma, loculicido-dehiscens. *Semina* semiorbicularia, biserialia, complanata, submembranacea, cinerea, margine exteriori plano. *D. Don Mss.*

One of the forms of *Phycella ignea*, of which there appears to be several in the gardens, differing in the breadth, and more or less intense green of their foliage, in the size and colour of the flower, and in the length of the staminal processes, which, in the present subject, are six in number, alternating with the stamina, and evidently originating from the confluent basis of the filaments. Whether the *Amaryllis cyrtanthoides* of the Botanical Magazine, is really distinct, or merely another form of the present species, I have not been able to satisfy myself. At Mr. Knight's Nursery, King's-road, Chelsea, are five or six forms differing in the particulars before-mentioned ; but as the genus requires a thorough revision, we shall leave the subject in the hands of Mr. Herbert, than whom no one is better able to clear up doubts of this nature.

The present is a native of the vicinity of Valparaiso, in Chile, and was introduced to the Botanical Garden, Chelsea, by Miss Reinagle, whose valuable favours we have had already frequent occasion to mention. It thrives freely in a light rich earth, and, in other respects, will require the same treatment as other half-hardy bulbous plants. Our drawing was taken from a plant, which blossomed at the Chelsea Garden, in October last.

The name is derived from $\phi\upsilon\kappa\omicron\varsigma$, a kind of purple pigment, and applied to this genus of plants, from the prevailing red colour of their flowers. *D. Don Mss.*



1. Portion of the tube of the Perianth laid open, to show the Stamens and Processes.
2. Pistil.



STREPTANTHERA cúprea.

Copper-coloured Streptanthera.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

STREPTANTHERA. *Spatha* bivalvis, membranacea, sublacera, arido-sphacelata. *Perianthium* 6-partitum, corollaceum : *tubo* brevissimo : *limbo* regulari rotato. *Stamina* 3, *tubo* inserta : *filamentis* erectis : *antheræ* *tortæ* *stylo* inclusæ. *Stigmata* 3, dilatata, biloba, fimbriata. *Semina* globosa. *Swt. br. fl. gard. ser.* 1. *fol. et t.* 209.

S. cuprea, foliis ensiformibus acutis striatis medio excisis, scapo 2-4-floro, perianthii laciniis ovatis obtusis carinatis supra basin intus bimaculatis. *Streptanthera cuprea.* *Swt. hort. brit. edit.* 2. p. 501.

Stem about a span high, leafy below, producing 2 or 3 scapes. *Leaves* distichous, sword-shaped, acute, mucronate, the mucrone bent a little on one side, ribbed up the centre on both sides, and striated with numerous prominent longitudinal lines, cut in from about the middle downwards; lower ones smallest, but of the same form; those on the scape sheathing the stem a great part of their length. *Scape* smooth, somewhat flexuose, 2 to 4-flowered. *Spathe* 2-valved, membranaceous, jagged a little at the point, the segments generally terminated in an acute point; outer one largest, marked with numerous reddish brown lines and patches; the inner ones bifid at the end. *Perianthium* 6-parted, petal-like : *tube* short and slender, purple : *segments of the limb* deeply parted, spreading widely open when expanded, closely imbricate, ovate, blunt at the ends, keeled down the back; the outer ones with the strongest keel, of a yellowish copper colour, purple at the base, and bearing a pale yellow spot on each side. *Stamens* 3, inserted in the mouth of the tube : *filaments*

smooth, triangular, inserted into the back of the anthers, a little above the base: *anthers* linear, twisted round each other, 2-lobed, opening in front for the exclusion of the pollen: *pollen* dark purple or velvet. *Ovarium* 6-angled, also a little twisted: *ovula* kidney-formed. *Style* smooth, red upwards, inclosed by the stamens. *Stigma* 3-cleft, the segments broadly dilated at the ends, deeply channelled on the upper side, having the appearance of 2 lobes; the edges beautifully fringed, so as to give it, with its hollow surface, the exact resemblance of a leaf of *Dionæa muscipula*; has it not the same uses?

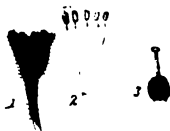
This elegant species was introduced by Mr. Synnot, from the Cape of Good Hope. It requires a light loam, and in other respects to be treated as other Cape *Irideæ*. It may be planted in a border in front of a Stove or Greenhouse, or other sheltered situation, where it blossoms freely.

Drawn from a specimen which flowered at Mr. Colvill's Nursery.

The generic name is derived from *στρεπτός*, twisted, and *ανθηρα*, anther, in allusion to the twisted nature of the anthers.



1. Stamens. 2. Style and Stigmas.



PRÍMULA ciliàta.

Fringed Primrose.

Natural Order. PRIMULACEÆ. *Brown prodr.* 427.

PRÍMULA. Supra fol. 5. series 2.

P. ciliata, foliis obovato-cuneiformibus grossè crenato-serratis villosulis subviscosis opacis, scapo angulato plurifloro, calycibus campanulatis angulatis ciliatis tubo corollæ ferè triplò brevioribus.

Primula ciliata. *Rœm. et Schult. syst.* 4. p. 148. *Spreng. syst.* 1. p. 574. *Lehm. monog. prim.* p. 79. *Schrank prim. fl. salisb.* n. 186. *Braun. fl. salisb.* 1. p. 162. *Suter fl. helv.* 1. p. 112. *Schleich. cent.* 1. pl. rar. n. 16.

Root-stalk about the thickness of a finger, hard, and of rather a woody texture, clothed with brown lanceolate scales. *Branches* several, short, crowded with leaves. *Leaves* obovate or broadly wedge-shaped, rather succulent, bluntly rounded, deeply notched and toothed, or serrate, with sharpish teeth, about 10 on each side of the leaf, opaque, slightly viscous, and clothed on both sides with very short hairs, the margins fringed with short hairs that are tipped with a small globular gland, attenuated rather abruptly down the footstalk. *Petioles* broad and flat. *Scape* short, not much above half the length of the leaves, slightly angular, pubescent. *Umbels* several-flowered, varying according to the strength of the plant. *Involute* of several very short bluntly rounded bractes, fringed with short hairs, and viscous. *Pedicels* slender, erect, variable in length, densely clothed with short hairs, that are all tipped with a small globular gland. *Calyx* short, campanulate, angular, pubescent, about one third shorter than the tube of the corolla: *laciniæ* blunt, spreading, fringed. *Corolla* pale flesh-coloured; *tube* slender, smooth, swollen where the stamens are inserted; *mouth* white, clothed with short villous down: *limb* spreading, flat: *seg-*

ments 5, distinct, deeply cleft, obcordate. *Stamens* 5, inserted in the tube a little below the mouth, and included: *filaments* very short. *Germen* nearly globular, smooth, scarcely the length of the calyx. *Style* short, smooth. *Stigma* large, capitate.

Nearly related to *P. villosa*, from which it is distinguished by the shorter and more coarsely serrated leaves, by its angular stalk, and, finally, by the tube of the corolla being quite smooth, and the wider calyx. A light loam suits it well; and the plant is readily increased by parting. It is admirably adapted for the rock-work, where its showy and early blossoms, being one of the earliest of the Auricula tribe, cannot fail to attract notice in the Spring. Our drawing was taken from a plant in Mr. Colvill's Nursery, King's-road, Chelsea.

The generic name is derived from *primus*, first; hence the name primrose, applied to *P. vulgaris*, from its being the earliest of the Spring flowers.



1. The Calyx. 2. The tube of the Corolla laid open, to show the insertion of the stamens. 3. The Pistil.



Mimulus

Paint by J. Ridgway Dec 1892

Mimulus

LEUCOCÁRPUS alatus.

Winged-stalked Leucocarpus.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 433. Trib. 3. GRATIOLEÆ. *D. Don Mss.*

LEUCOCARPUS. *Calyx* campanulatus, 5-dentatus. *Corolla* tubulosa, ringens, limbo 5-loba, bilabiata. *Stamina* 4, didynama, fertilia. *Stigma* bilamellosum. *Bacca* bilocularis, polysperma. *D. Don Mss.*

Calyx campanulatus, 5-dentatus, demùm, augescenti bacca, rumpens, costis 5 elevatis hinc 5-angularis: *dentibus* conduplicatis, acuminatis, recurvis, subæqualibus. *Corolla* tubulosa, ringens: *fauce* plicis 2, elevatis, barbatis: *limbo* 5-loba, bilabiata: *lobis* subrotundis, margine revolutis, æstivatione imbricatis. *Stamina* 4, didynama, fertilia; *duo superiora* breviora! *filamenta* glabra, subarcuata, infernè corollæ tubo connata: *antherarum lobis* divaricatis, connectivo hemisphærico insertis, suturâ longitudinali dehiscenibus. *Pollen* farinaceum. *Ovarium* biloculare. *Stylus* filiformis, glaber. *Stigma* bilamellosa-partitum: *lobis* ovatis, leviter acuminatis, undulatis, suprâ copiosè minutèque papillosis. *Bacca* subrotunda, spongiosa, succulenta, bilocularis, indehiscens (deliquescent?) polysperma, basi styli remanenti mucronulata. *Placentæ* 2, magnæ, succulentæ, septo (facie cauli oppositâ) contrario infixæ, marginibus revolutis. *Semina* unicâ serie creberrima, nec cumulata, ovali-oblonga, fulvescentia: *testa* subcrustacea, extûs reticulato-rugosa, vix scrobiculata: *chalazâ* et *umbilico* (punctis prominulis) nigricantibus, consimilibus: *albumen* copiosum, carnosum. *Embryo* erectus. *Radicula* vaga.

Herba erecta, ramosa, glabra, virens, cubitalis v. tripedatis. Radix fibrosa, annua? Caulis et rami quadrangulares, angulis acutis, alatis. Folia opposita, amplexicaulia, lanceolata, acuminata, argutè serrata, membranacea, suprâ leviter rugoso-venosa, subtûs varicosa, pallidiora, infernè angustata, margine basin versus revoluta, ac integerrima, subinde, basibus auriculatis approximatis subperfoliata, palmaria v. spithamæa, nunc dodrantalia. Flores axillares, cymosi. Cymæ plerumque bis trifidæ, multifloræ, rarè trifloræ, flore intermedio semper solitario, cæteris ternis septennatisve. Pedunculi 4-angulares, foliis plurimum (5-plâ) breviores. Bracteolæ subulatæ, adpressæ, glabræ. Corolla sulphurea, vix uncialis. Bacca alba, symphoricarpo racemoso magnitudine et colore adsimilis, sapore amaro et dulci nauseabunda. *D. Don Mss.*

Leucocarpus alatus. *D. Don Mss.*

Conobea alata. *Graham in Edinb. New Phil. Journ.* Oct. 1830.

Mimulus perfoliatus. *Kunth in Nov. Gen.* 2. p. 371? *Synop.* 2. p. 123? *Graham in Bot. Mag.* t. 3067.

Discovered by Messieurs Schiede and Deppe, by the sides of streams, at Cuesta Grande de Chiconquiera, in the Province of Vera Cruz, Mexico, bearing fruit in September; and from seeds, picked from specimens transmitted by these gentlemen to Mr. Lambert, in the beginning of last year, plants were raised which blossomed the following Summer, along with the beautiful *Lophospermum erubescens*, introduced at the same time, and already figured at TAB. 68. of this work. Our drawing was taken from the collection of Whitley, Brames, and Milne, at Fulham. The plant thrives well in the open border, where it ripens its seeds in abundance.

This plant, which is, perhaps, not different from M. Kunth's *Mimulus perfoliatus*, agrees so entirely with *Mimulus*, both in general appearance, and in the form and structure of its flower, that, without the fruit, the propriety of referring it to that genus, could not be questioned; but its fruit being once seen, it will be evident that the plant can neither be referred to *Mimulus*, nor to any other genus hitherto established among the *Scrophularinæ*. In its fruit, *Leucocarpus* comes near to *Fieldia* and *Cyrtandra*, which of themselves are scarcely different from *Columnea*, of which *Mitraria* of Cavanilles, is a species. I had, formerly, (Edinb. Phil. Journ. v. 7. p. 83. and Prod. fl. Nepal. p. 121.) proposed to separate *Didymocarpus*, and certain other genera akin to it, into a distinct family; but a more accurate examination has fully convinced me that they must be united to the *Gesneriaceæ*, which again are hardly distinguishable by any tangible character from the *Scrophularinæ*. They may, however, be considered as forming a distinct group, connecting the latter with *Acanthaceæ*, to which they approach, in their seeds being furnished with umbilical cords, by which they are attached to the placenta, and in the frequent absence of albumen; but which, in such minute seeds, is liable to be overlooked, or confounded with the testa, to which it closely adheres. Gærtner is, therefore, perfectly correct, in attributing to *Cyrtandra* albuminous seeds, although his plate represents that substance as too copious. The radicle always points towards the hilum; and Roxburgh, and myself, have erred in describing the embryo as inverted, for its situation does not really differ from *Scrophularinæ*.

The name is derived from λευκος, white, and καρπος, fruit.
D. Don Mss.

◆ ◆ ◆

1. Calyx. 2. Corolla laid open, to show the stamens. 3. Pistil. 4. Longitudinal section of the berry. 5. Transverse section of ditto.





OXALIS crenata.

Crenate-petalled Wood-sorrel.

Linnean Class and Order. DECANDRIA PENTAGYNIA.

Natural Order. OXALIDEE. *DC. prodr.* 1. p. 689.

OXALIS. *Calyx* profundè 5-partitus. *Petala* 5. *Stamina* definitè numerosa (10 v. 20); *extimis* 5 plerumque rudimentariis. *Filamenta* basi connata. *Styli* 5.—Herbæ (plerumque utriusque orbis zonis temperatis propriæ) sæpius perennes, humillimæ. Folia petiolata, ternata, digitata, aut simplicia. Flores pedunculati, solitarii v. plures umbellati; in capensibus sæpius rubri; in americanis lutei. D. Don Mss.

O. crenata, caulescens, erecta; foliis ternatis: foliolis obcordatis, floribus umbellatis, petalis crenatis, radice tuberosâ. D. Don Mss.

Oxalis crenata. Jacq. *oxal.* p. 7. Willd. *sp. pl.* 2. p. 799. Persoon *syn.* 1. p. 518. Spreng. *syst.* 2. p. 429. *DC. prodr.* 1. p. 691. G. Don *syst. gard. and bot.* 1. p. 756.

O. Arracacha. G. Don l. c. 1. p. 756.

Oxis lutea, annua, floribus dentatis. Feuill. *peruv.* p. 49. t. 24.

Radix more *Solani tuberosi* tuberosa: tuberibus oblongis, succulentis, magnitudine ovi columbini, lutescentibus, funiculo fusiformi depereferenti connexis, è squamis (foliorum primordiis) carnosis, magnis, confluentibus compositis, superficie inæqualibus, sæpè tuberculatis, sapore herbaceo, parùm acido. *Caulis* erectus, ramosus, teres, carnosus, crassitie digiti minoris, bi v. tripedalis, pilis mollibus parcè instructus, apicem versus subangulatus. *Rami* ad insertionem sæpè sanguinolenti. *Folia* alterna, longè petiolata, ternata: foliolis obcordatis, brevissimè stipitatis, pendulis, suprâ glabriusculis, subtùs pallidioribus, copiosè pilosis, semipollicaribus; duobus lateralibus basi obliquis: stipitibus brevissimis, crassis, geniculatis, barbatis. *Petiolis* semiteretes, glabriusculi, suprâ planiusculi, lineâ depressâ angustâ exarati, basi geniculati. *Stipulæ* adnatæ, decurrentes, tenuissimè membranacæ, ciliatæ, pellucidæ, apicibus liberis, acutis. *Pedunculi* axillares, filiformes, 6-unciales, pluri (4-7)-flori, parcè adpressèque villosi. *Pedicelli* filiformes, vix pollicares. *Bracteolæ* lineari-lanceolatæ, acuminatæ, villosæ, subitè marcescentes. *Flores* erecti, campanulati. *Calyx* profundè 5-partitus, quandoque 6-partitus: segmentis lanceolatis, obtusis, adpressè villosis, basi invicem se imbricatis, striatis, margine membranaceo albo; interioribus parùm angustioribus. *Corolla* campanulata, aurea, calyce duplò longior, 5-petala, nunc 6-petala: petalis obovatis, unguiculatis, 5-nerviis, subbilobis, margine inæqualiter crenatis, crispatis, involutis: angustibus supernè bicallosis, sæpè connexis, imâ basi angustatis: nervis ramosis, sanguineis; lateralibus 2 basi connatis. *Stamina* 15—20! interiora 5 v. 6 duplò longiora; exteriorum alternis rudimentariis. *Filamenta* subulata, leviter compressa et pilosa, basi connata, atque subinde monadelphæ. *Anthere* auræe, incumbentes, biloculares. *Pistilla* 5 v. 6, in circulum digesta. *Ovaria* (folliculi) compressa, glabra, unilocularia, in capsulam 5-6-locularem connata: ovulis suturæ interiori insertis. *Styli* pilosi. *Stigmata* biloba! lobis dilatatis, copiosè papillosis. *Capsula* matura mihi nondùm visa. D. Don Mss.

This plant, remarkable for the singular enlargement of its subterraneous stems, which exactly resemble the tubers of the potatoe, appears to be what is termed a progressive annual. The flowering stems die annually, root and all, when the tubers are found entirely separate, with a portion of the filiform attachment adhering to them; by those the plant usually appears to increase itself, for it rarely, if ever, perfects seeds, at least in this country, the colder climate of which may favour the production of tubers, as Feuillée, whose description and figure is otherwise accurate, seems not to have been aware of this singular part of its economy. The tubers are produced in considerable plenty, and are often two inches long, with an inch in diameter. When raw they are slightly sub-acid, but on being boiled they lose it entirely, and taste very much like the potatoe, for which they might form occasionally an agreeable substitute at the tables of the curious. Something of the same sort of tuber is found in the common wood-sorrel, but there the fleshy bases of the rudimentary leaves are distinct, and not confluent, as in our plant. It is a native of Peru, and is cultivated abundantly in the gardens about Lima, as a salad, for which purpose its succulent stems, and acid flavour, seem strongly to recommend it. It grows freely in the open border, and is readily increased by cuttings, as well as by the tubers, which require to be taken up and treated as potatoes.

The *Oxalideæ* are very properly placed by M. De Candolle between the *Geraniaceæ* and *Zygophylleæ*, to each of which they approach in many respects; and along with the *Rutaceæ*, they appear to form a very distinct natural class. The *arillus* in *Oxalideæ*, may be regarded as a sort of inner pericarpium, and analogous to that of *Geranium*, and others of the same family, wherein the pericarpium is reduced to its most simple form. I do not consider the *Ampelideæ*, or *Vitigeneæ*, as belonging to this class, but as being closely allied to the *Araliaceæ*, next to which I have formerly placed them. I wish here to correct a grave error, into which I had fallen, (*Prodr. Fl. Nep.* p. 186.) in ascribing to the *Araliaceæ* "semina erecta," instead of "semina pendula;" and although I have been long aware of the blunder, it is only now that I have had an opportunity of correcting it.

The generic name is derived from $\alpha\xi\upsilon\varsigma$, *acid*, from the taste common to the leaves of this genus. *D. Don Mss.*



1. Calyx. 2. Stamens. 3. Pistils.



VIOLA suavis.

Fragrant Violet.

Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. VIOLARIEÆ. DC. *prodr. syst. n. t. 1. p. 287.*

VIOLA. *Capsulis* turgido-subrotundis, caulibus subnullis. DC. *loc. cit.* *Calycis sepala* inæqualia, omnia plus minùs deorsùm in appendices auriculæformes (è dilatationibus nervorum prodeuntes) producta, post anthesin erecta. *Petala* inæqualia, æstivatione convolutivâ, ungue trinervi; inferius deorsùm in calcar cavum plus minùs productum. *Stamina* approximata aut coarctata (nec coalita) ad apicem dentium tori pentagoni 5-dentati inserta. *Filamenta* basi dilatata oblonga vel triangularia, antheras demissius gerentia; lobi antherarum basi divergentes, stamina 2 anteriora dorso appendices varias nectariferas in calcar intrantes gerentia. *Ovarium* nunc superum, nunc basi toro concavo cinctum et ideò semi-inferum. *Valvula capsulae* elasticæ post maturationem contractæ semina ejicientes; *semina* horizontalia manifestè carunculata, plus minùs ovoidea et nitida. *Embryo* oblongus, radícula teretiuscula, cotyledones sæpiùs oblongo-orbiculatae planiusculæ radiculâ vix longiores.—*Herbæ plerùmque perennes, rarissimè annuæ, nunc caule brevissimo vel subterraneo, unde acaules dictæ, nunc caulescentes vel suffrutices parvi; folia alterna marcescentia; pedunculi solitarii axillares uniflori, 2-bracteolati non articulati, apice reflexi; flores cernui; folia seminalia oblonga ovatave, petiolata; primordialia opposita, sed rarè cœtanea.* DC. *loc. cit. p. 291.*

Sect. I. NOMIMIUM. *Stigma* rostratum, foraminulo ad extremitatem rostri sito; rostrum plus minùs recurvum, nunc deorsùm marginatum et tunc planiusculum et obliquum, nunc absque margine et tunc deorsùm convexusculum. *Stylus* ab apice ad basin attenuatus. *Stamina* oblonga approximata. *Torus* planiusculus. *Capsula* sæpiùs trigona. *Semina* 15-27. *Folia seminalia* sæpè obovata vel oblonga.

§. 2. *Stigmatibus convexis, deorsùm immarginatis.*

V. *suavis*, acaulis, stolonifera, stigmate uncinato nudo, foliis reniformibus basi involutis rugosis dentato-crenatis pubescentibus, stipulis lanceolatis ciliatis apice longè attenuatis, sepalis oblongo-lanceolatis obtusis, petalis duobus superioribus oblongis obtusis infimo emarginato subduplò angustioribus.

Viola suavia. *Marsch. à Bieb. flor. taur. v. 3. suppl. p. 164. Spreng. syst. v. 1. p. 797. Swt. hort. brit. ed. 2. p. 44. n. 33. G. Don gen. syst. 1. p. 325.*

Perennial, herbaceous, producing numerous stems from the base and long stolones that run along the surface of the ground and throw up shoots at some distance. *Leaves* kidney-shaped, or some inclining to cordate, rounded at the

point, folded in on each side at the base, so as to make it appear hollow or cucullate, pennately nerved, and numerouslly veined, rugged, notched at the edges with numerous broad shallow notches, pubescent, of a pale green colour. *Petioles* rather long, flattened but prominently ribbed on the upper side, slightly winged by the sides, keeled underneath, clothed with a short close pubescence. *Stipules* long, lanceolate, tapering to a long slender point, fringed with long hairs. *Peduncle* quadrangular, channelled down the back, bearing a pair of opposite bractes about the middle. *Bractes* lanceolate, taper-pointed, and fringed like the stipules. *Flower* terminal, nodding, of a pale blue, white below the centre, delightfully fragrant. *Calyx* deeply 5-cleft, the segments oblong, obtuse. *Petals* 5, the upper part pale blue, the lower part white: two upper ones, and the side ones, oblong or cuneate obtuse; the lower one shorter, broader, and slightly retuse at the point. *Spur* about half the length of the calyx, hooked a little at the point. *Stamens* 5, the three upper ones sessile, the two lower ones on long crooked filaments that extend down the spur: anthers two-celled, with a brown membranaceous scale on their point. *Ovarium* pubescent. *Style* slender at the base, thickening upwards, bent at the point. *Stigma* hooked.

Our drawing of this interesting addition to our Sweet Violets, was taken at the Chelsea Botanical Garden, last Spring. Its flowers are very fragrant, and produced in great profusion; and the plant is readily increased by parting the roots, or by seeds. We observed what we considered the same species in the Nursery of Messrs. Allen and Rogers. It is a native of orchards in the Ukraine, and in hedge-rows about Charkow. Distinguished from *V. odorata* by its paler green herbage, and by its larger and paler flowers, with the four upper petals longer and narrower, and the lowermost broader and more distinctly emarginate. The *stipules* are also narrower.

Viola, *ῑον*, in Greek, was the favourite flower of the Athenians, and was our *V. odorata*. The name is of uncertain derivation, but it has given rise to the name of a peculiar colour, prevailing in the flowers of this genus.



1. Calyx. 2. Lower petal. 3. One of the upper petals. 4. One of the lateral ditto. 5. Stamens. 6. Pistil.



Mimosa

Pub. by J. L. G. & J. L. G. & J. L. G.

Mimosa

DACTYLICÁPÑOS *Thalictrifolia*.

Berry-bearing Fumitory.

Linnean Class and Order. DIADELPHIA HEXANDRIA.
Natural Order. PAPAVERACEÆ. *Juss. gen.* 235. Trib. 2.
 FUMARIÆ. *D. Don Mss.*

DACTYLICAPNOS. *Petala* 4; 2 *exteriora* basi calcarata. *Bacca* unilocularis, polysperma. *D. Don Mss.*

Calyx 2-phyllus: *foliolis* cordatis, acutis, denticulatis, membranaceis, adpressis, caducis. *Petala* 4, coalita; 2 *exteriora* maxima, cymbiformia, substantiâ spongiosa, dorso carinata, carinâ basi apiceque productâ, saccatâ, hinc basi calcarata, inde apice galeata; 2 *interiora* opposita, unguiculata, ungue elongato capillari: *laminâ* obcordatâ, conduplicatâ, carinatâ, margine membranaceâ, basi emarginatâ, appendiculâ (carinæ apice) rotundatâ ventricosâ auctâ. *Stamina* in duas phalanges 6: *filamenta* membranacea, uninervia: *antheræ* per tria; *lateralibus* 2 unilocularibus; *intermediâ* biloculari. *Ovarium* ovato-oblongum, compressum, 1-loculare. *Stylus* ovario longior, ancipiti-compressum. *Stigma* compresso-planum, viride, quadratum, apice leviter emarginatum, marginibus lateralibus dilatatis, lineolâ elevatâ instructis, angulis tuberculiferis, tuberculis albis, inferioribus duplò majoribus. *Bacca* succulenta, unilocularis, polysperma. *Placenta* 2, oppositæ, parietales, seminiferæ. *Semina* atra, subreniformia, lineolatim punctulata.

Herba (nepalensis) *scandens, cirrhosa, lævis*. Radix *fibrosa, annua*. Caulis *teres, ramosus, punctis lineolisque purpurascentibus copiosè notatus*. Folia *alterna, petiolata, dichotoma*: *dichotomiis biternatis*; alterâ *cirrhiferâ*: *foliolis stipitatis, ovatis, acutis, membranaceis, trinerviis, suprà viridibus opacis, subtùs glaucis, basi attenuatis; semuncialibus*: *nervis purpureis*; *lateralibus dichotomis*; omnibus *ramosis, reticulato-venosis*. Cirrhi *spirales, ter dichotomi, suprà planiusculi, purpurascentes*. Petioli et rachis communes *purpureo-punctati, suprà leviter canaliculati, subtùs convexi, basi paulatim dilatati*. Racemi *axillares pluri (5-9)-flori*. Corolla *sordidè lutea, apice atropurpurea, ultra semipollicem longa*. *Bacca dilutè violacea, ferè uncialis*. *D. Don Mss.*

Dactylicapnos thalictrifolia. *Wall. tent. fl. nepal. p. 51. t. 39. G. Don gen. syst. of gard. and bot. 1. p. 141.*

Diclytra scandens. *Don prodr. fl. nepal. p. 198.*

Discovered by Dr. Wallich, on the mountains of Shiva-poor, and at Naokote, in Nepal, where it flowers in May, and its fruit are ripe in August. With us the plant does not blossom until late in Autumn; it has much the air of *Adlumia fungosa*, but its fruit being a berry, essentially distinguish it as a genus, which, on this account, forms a remarkable exception in the order. An approach to the berryed fruit may be remarked in *Fumaria*, as the genus is now limited, whose monospermous capsule is almost a drupe, as in *Crambe*, and certain other *Cruciferae*, but which is still more distinctly exemplified in *Monnina*, belonging to the order *Polygaleae*, which I have formerly (*Prodr. Fl. Nepal.* p. 199.) proposed to place between the *Cruciferae* and *Papaveraceae*, and to which they appear to me to be closely related. I have always regarded, with Jussieu, the *Fumariaceae* as constituting nothing more than a section of *Papaveraceae*, and having again carefully considered the subject, I see still stronger reasons for adhering to my former view. The genus *Hypecoum*, whose stamina are definite, and where the petals are also considerably modified, almost as much so, even as in *Fumariaceae*, appears clearly to connect the two groups together.

Our drawing was taken from the collection of Messrs. Whitley, Brames, and Milne, at Fulham. It is a hardy annual, and is propagated by seeds.

The generic name is derived from *δακτυλος*, a finger, and *καρπος*, fumitory, and has been so named by Dr. Wallich, from the form of its nearly cylindrical berries, almost an inch long. *D. Don Mss.*



1. Leaf of the Calyx. 2. Exterior petal with 3 of the Stamens. 3. Inner Petal.
4. Bundle of Stamens. 5. Ovary, surmounted by the style and stigma. 6. Transverse section of the same, showing the insertion of the seeds.





Ed Smith del

Reddy & Redgery Jan 1882

Waddell

RHODODÉNDRON indicum.

var. ignescens.

Fiery Indian Rhododendron.

Linnean Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICÆE. *D. Don prodr. flor. nep.* p. 148.

Subordo III. RHODORACEÆ. *D. Don loc. cit.* p. 152.

RHODODENDRON. *Supra fol.* 10. series 2.

Sect. III. TSUTSUSI. *Calyx* 5-partitus: segmentis longis, erectis, angustis, acutis. *Corolla* tubulosa, rotata, 5-partita: segmentis patentibus. *Stamina* 10, inæqualia, adscendentia aut suberecta.—*Frutices* erecti aut patentes ramosi, sempervirentes aut subdecidui: ramis virgatis, junioribus pilosis. *Folia* hirsuto-strigosa. *Flores* terminales subsolitarii aut gemini.

R. indicum, floribus terminalibus solitariis aut geminis, ramis strigosis, foliis elliptico-lanceolatis basi et apice attenuatis strigosis, dentibus calycinis elongato-lanceolatis ciliatis patentibus.

Azalea indica. *Linn. sp. pl.* p. 214. *Willd. sp. pl.* 1. p. 831. *Hort. Kew. edit.* 2. vol. 1. p. 318. *Pers. syn.* 1. p. 212. *Ram. et Schult. syst.* 4. p. 374. *Spreng. syst.* 1. p. 628.

Chamærhododendron exoticum, amplissimis floribus liliaceis. *Breyn. prodr.* 1. p. 23. *prodr.* 2. p. 31. *ejusdem edit. alt.* p. 16 et 53.

Cistus indicus Ledi alpini folio, floribus amplis. *Herm. Lugdb.* 152. t. 153. *Raj. hist.* 1895.

TSUTSUSI. *Kämpf. Amoen.* 845. t. 846.

α *puniceum*. Red-flowered. *Botan. magaz.* t. 1480.

β *ignescens*, segmentis 4 inferioribus flammeis unicoloribus: superioribus subulacinis obsolete punctatis. *Supra tab.*

γ *phaniceum*. Purple-flowered. *Botan. magaz.* t. 2667.

δ *purpureum*. Double purple. *Botan. magaz.* t. 2509.

ε *luteum*. Double yellow.

Stems numerous, slender, very much branched, spreading, strigose, or thickly clothed with brown prostrate hairs. *Leaves* of a thin weak texture, alternate or scattered, in clusters near the end of the branches, elliptic or elliptical lanceolate, tapering to both ends, terminating in a shortish, horny, bluntish mucro at the point: strigosely hairy, the hairs procumbent, and giving the foliage a brown appearance. *Petioles* dilated a little at the base, flat on the upper side, and rounded below, densely clothed with close-

pressed rusty hairs. *Flowers* terminal, solitary, or in pairs. *Peduncles* short, thickly covered with close-pressed hairs. *Calyx* deeply 5-cleft: the segments elongately lanceolate, sharp-pointed, attenuated to the point, spreading or slightly reflexed when the flower is expanded, clothed with close-pressed hairs, and fringed with long spreading ones. *Corolla* shortly tubular, bluntly 5-angular and 5-furrowed, rotate, deeply 5-parted, spreading, flame-coloured: segments nearly equal, ovate, furrowed on the upper side; the two lower ones more deeply divided: upper one rather smallest, tinged with lilac, and inconspicuously spotted. *Stamens* 10, short, nearly erect: *filaments* red, hairy about half way up, the upper part smooth, slender: *anthers* 2 lobed, attached by their back to the filaments, bursting at the point for the exclusion of the pollen: *pollen* white, stringy. *Ovarium* densely clothed with long white close-pressed hairs. *Style* smooth, bearing a few hairs near the base, bright red, very long, exserted a great way beyond the stamens. *Stigma* capitate, slightly lobulate, with a pit in the centre.

This splendid variety was imported by Mr. Tate, in the Honourable East India Company's Ship Orwell, from China. It differs from the old variety in being much more branched, with the branches more slender and spreading, instead of upright. The flowers are much more abundant, and scarcely more than half the size, and of a brighter crimson. It ought to be planted in peat near a south wall, or other warm sheltered situation, and ought to be protected by a mat in frosty weather. The generic name is already explained at *folio* 117.



1. Calyx. 2. Two of the Stamens. 3. Pistil.



LACHENALIA mutabilis.

Changeable-coloured Lachenalia.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELEÆ. *Brown prodr.* 1. p. 274.

Div. III. Flores spicati. Radix bulbosa. Perianthium basi tubulosum.

LACHENALIA. *Perianthium* inferum, sexdivisum, oblato v. cylindrico-campanulatum : *segmentis* 3 *exterioribus* brevioribus oblongis calycino-conniventibus carunculâ externâ infra apicem : *interioribus* 3 alternis suprâ rotundato-dilatatis patulis. *Filamenta* basi laciniarum perianthii inserta, subassurgentia : *antheræ* incumbentes. *Stylus* subassurgentèr porrectus. *Stigma* simplex. *Capsula* membranosa, subtrilobo-trigona, 3-locularis, 3-valvis : *valvis* medio septiferis. *Semina* biseriata, plura in loculo globosa. — *Bulbus tunicatus* ; folia 1-plurima, ambientia, subcarnosa, tenera, lineari ad lato-ovata. Scapus carnosus. Flores erecto-spicati v. racemosi, undique sparsi. Swt. brit. flor. gar. series 1. v. 2. t. 179.

L. mutabilis, foliis oblongo-lanceolatis acutis canaliculatis glabris margine undulatis, floribus subsessilibus horizontalibus urceolato-campanulatis, bracteis minimis acuminatis basi dilatatis, staminibus sub-inclusis stylo subæquantibus.

Lachenalia mutabilis. Swt. hort. brit. p. 420. n. 30. Edit. 2. p. 529. Lodd. bot. cab. t. 1076. Colv. catal. edit. 3. p. 20. col. 3.

Root a tunicated bulb, producing numerous small white fibres at the base. *Leaves* generally two, sometimes only one, at first erect or ascending, but becoming horizontally spreading, with the points reflexed or revolute, about nine inches in length, and nearly one in breadth at the base, convolutely sheathing the scape, oblongly lanceolate, acute, channelled, rather succulent, smooth and glossy, the margins more or less undulate, spotted with purple underneath near the base. *Scape* about the length of, or scarcely so long as the leaves, succulent, cylindrical at the base, and bluntly angular in the flowering part, glaucous, the upper part of a brilliant light blue. *Flowers* numerous, crowded, horizontally spreading, sessile, or scarcely with a footstalk. *Bractes* very small, taper-pointed, broader at the base. *Perianthium* between bell-shaped and pitcher-shaped, about one third of an inch in length, 6-parted : 3 *outer segments* erect, calyx-like, equal in size, about one third shorter than the inner ones,

succulent, obtuse, bluntly keeled at the back, of a greenish yellow with brown points: *inner ones* petal-like, spatulate, spreading at the points, of a light yellow with an elegant brownish purple spot, a little below the point, one of them rather narrower, with a shallow notch at the end: *upper flowers* as well as the scape of a brilliant light blue before expansion. *Stamens* 6, inserted in the base of the segments: *filaments* smooth, ascending, about the length of the outer segments, attached to the back of the anthers: *pollen* yellow. *Ovarium* smooth, green, oblong, six-furrowed. *Style* smooth, about the length of the stamens, the point ascending. *Stigma* a small simple point.

Our drawing of this curious species, was taken from bulbs that flowered at the Nursery of Mr. Colvill, at Chelsea, and were imported from the Cape by Mr. Synnot, at the same time as the numerous other rare Cape bulbs, that were introduced by him, several of which we have already published in our preceding Numbers.

The present genus contains numerous handsome species, but a great many of them frequently disappear from the different collections; we believe the reason of this is chiefly owing to the bulbs being exposed to the heavy rains after flowering, and being grown in pots they sometimes become sodden; and as the bulbs are very succulent, and scarcely any of them being covered with a dry scaly bark for protection, (so different from most other bulbs,) this causes them frequently to rot: the better method of treatment would be to take them out of the ground as soon as they have lost their foliage, and keep them dry in as cool a place as possible, that they may not begin to grow too soon; by this mode of treatment they may be either planted in a warm border in Spring, or in pots in a frame or greenhouse: we have always observed that dry imported roots from the Cape, flower much finer, than ever they do after.

The generic name was given in compliment to Wernerus De Lachenal, of Switzerland, who published some observations on medical botany at Basle, in 1776.



1. Flower laid open, to show the insertion of the Stamens, and unequal segments of the Perianthium. 2. Ovarium terminated by the Style and minute Stigma.



P. aurantiaca

Pub. by J. P. Dywag, Feb. 1892

W. Wood

CALCEOLARIA Wheeleri.

Wheeler's hybrid Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINEÆ. *Brown prodr.* 1. p. 433.

Sect. 2. Stamina (2) antherifera.

CALCEOLARIA. *Calyx* quadrilobus v. quadripartitus. *Corolla* tubo brevissimo, limbo bilabiato; suprà minora, infra magno inflato concavo calceiforme inflexo et in tubi faucem prono. *Stamina* 2. *Antheræ* loculis divaricatis, altero substerili. *Capsula* conica semibivalvis, valvulis bifidis.—*Herbæ* aut suffrutescentes, perennis aut annuæ; foliis plurimis oppositis raro alternis; pedunculi uni aut multiflori, axillares, paniculati aut corymbosi terminales; paucis folia radicalia, scapi 1-2-flori.

C. Wheeleri, herbacea, foliis venoso-rugosis hispidò-scabris: inferioribus oblongo-ovatis obtusiusculis, serrato-dentatis basi attenuatis; caulinis subintegerrimis, corymbis terminalibus compositis patentibus multifloris, segmentis calycis lato ovatis obtusiusculis.

A perennial herbaceous plant. *Leaves* oblongly ovate, bluntish, much veined and rugose, hispidly hairy: lower ones attenuated towards the base, where they are entire; the upper part deeply jagged, serrately toothed, spreading: stem ones opposite, entire, or the lower ones slightly toothed. *Stem* erect, very hairy. *Corymbs* erect, divided. *Peduncles* and *pedicles* hispidly hairy, as is also the calyx. *Calyx* deeply 4-lobed: segments broadly ovate, bluntish. *Flowers* large, of a brilliant purple, much inflated: upper lip small: lower one large, rounded, attenuated inwards. *Stamens* 2, lobes divaricate. *Capsule* conical, hispid. *Style* slender, upright, tipped by a small stigma.

For the opportunity afforded us of giving a figure of this handsome plant, we are obliged to Mr. G. Wheeler, Nurseryman, at Warminster, who sent us a plant in full flower, from his extensive collection, the latter end of May last; it surpasses all the purple ones that we have yet seen; his account of it to us was, that it is a double hybrid, raised from

the seed of a hybrid that was produced from *C. purpurea*, fertilized with *C. corymbosa*, this was again fertilized by *C. purpurea*, which has brought it a stage back again. The seed had been sown early in 1831, and flowered in May, so that it is likely to be a very free bloomer, and was, at the time when in our possession, seeding freely itself, as may be seen from our figure. Mr. W. informs us, that he has raised several other very handsome hybrids from the same parent, very different from the present ; it appears that there will soon be as many hybrids in the present genus, as there is in Geraniaceæ. The whole or the greater part of the herbaceous species will bear our winters in a warm border, and if a collection of them were planted together, with a flower pot placed over each in severe frost or very wet weather, and single mats thrown over the pots, they would thrive well, and make a fine appearance in Spring and Summer ; and such a Winter as the present has been, many would stand well without the least protection : when the weather is fine and mild, the pots and mats must be all removed, to give them light and air, and even when frosty, if the sun shines warm on them.

The generic name is derived from *calceolus*, a slipper or small shoe.



1. Calyx. 2. Corolla laid open, to show the hollowness of the under lip, and the insertion of the stamens in the upper one. 3. Ovarium terminated by the Style and small Stigma.

NOTE.—We notice several typographical, and a few other errors, in some of the late Numbers, which have unavoidably been looked over since we have been from home ; those will be all corrected in an early Number.





SPARAXIS lineata.

Red-lined Sparaxis.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

SPARAXIS. *Inflorescentia* disticho-spicata, alterna, remotius seorsim bivalvi spathacea; *spatha* membranacea ampliuscula aristato-lacera plerumque arido-sphacelata. *Perianthium* petaloideum, superum, erectum, infundibuliformi-patens, tubuloso-sexfidum: tubus gracilis brevior; limbus sex-partitus amplius regularis æqualis stellato-turbinatove explanatus. *Stamina* tubo adnata, inclusa, collateralis-inflexa, recto-inclinata, nunc adscendentia, rarius trifaria erecta. *Anthera* lineares, a dorso appensæ. *Stylus* gracilis, directione staminum. *Stigmata* 3, angustius lineari-complicata, recurvato-divergentia. *Capsula* membranacea oblonga, rotundate trigona, torulosa; trilocularis, trivalvis; valvis septigeris. *Semina* biserialia, plurima, subglobosa.—*Bulbo-tuber ovatum reticulis multiplicibus tenuibus (externis sericeo-fibrosis) vestitum*; folia 4-10 *collaterali-disticha, ensata, dense-striatula, latitudine bilineari ad uncialem, caulina sæpius in axillis bulbifera*; caulis simplex vel paniculato-ramosus, truncialis ad orgyalem; flos raro unicus, sæpius in ramo pauci, ampli, speciosi, colore quam maxime ludentes; semina magnitudine fere Sinapeos. Swt. in Supra folio 160. series I.

S. lineata, caule erecto folioso dichotomo, scapis cylindricis glabris subtrifloris, foliis ensiformibus striatis acutis, spatha membranacea; laciniiis apice cuspidatis, perianthii segmentis erectis acutis subtus carinatis.

Root a bulb-tuber, clothed with a reticulated fibrous network, composed of the bases of the former decayed leaves. *Leaves* distichous, ensiform, acute, oblique from about the middle, from 4 lines to half an inch in breadth; from 5 to 8 inches in length. *Flower-stem* erect, leafy below, frequently forked. *Scapes* 2 to 4-flowered, cylindrical, smooth. *Spathe* scarcely an inch long, 2-valved; valves ovate, lacerate at the point, membranaceous, veined with chestnut-coloured veins: laciniae cuspidate, or ending in slender points. *Perianthium* 6-parted; *tube* about 3 lines long; *throat* yellow: *segments* 6, erect, tapering to the base, acute, keeled at the back, and longitudinally marked with a red line, and more

or less tinged with pink, inside hollow, yellow at the base, marked about the middle with a brown mark, the upper part white. *Stamens* 3; *filaments* dilated below to about the middle. *Style* smooth, scarcely half the length of the limb. *Stigmas* 3, slender, spreading, dilated at the points, and fimbriate.

Our drawing of this pretty species of *Sparaxis*, was taken from a bulb at the Nursery of Mr. Colvill, King's Road, Chelsea, where several of them were in flower last Spring; it is a very pretty neat plant, and appears to be a very free bloomer. We cannot see any described species with which it agrees in any publication that we have examined.

The plant that produced the present specimen had only a simple scape, which was, most probably, the reason of its producing four flowers; they more frequently produce a forked scape, with three flowers on the middle one, and two on the side one: the bulbs were grown in a pit, and are covered with a mat in Winter. We find all the Cape, Mexican, and Chile bulbs, succeed quite as well in a warm dry border, in a mixture of sandy loam and peat, and to be covered with a mat in very wet or sharp frosty weather; or the bulbs may be taken up after flowering, and if kept in a cool dry place they may be kept out of the ground till early in Spring, when all the sharp frost is over: we have tried this plan, and find it succeed very well.

The generic name is derived from the Greek *σπαρὰξ*, from its torn or lacerated spathes.



1. Bulb. 2. Corolla spread open, to show the filaments inserted near the base of the tube. 3. Style terminated by the 3 spreading fimbriate Stigmas.



NARCISSUS stellaris.

Starry Narcissus.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr. p. 296.*

Sect. V. NARCISSINEE. Radix bulbosa. Spatha monophylla, 1-multiflora. Perianthium tubulosum, petaloideum, 6-partitum, coronatum.

NARCISSUS. Spatha 1-3-flora. Perianthii laciniis plus minus stellatus. Corona crassa brevi patellari segmentis multum breviori. Filamenta tubo adnata 3 inferiora cum antheris parum inclusa: et 3 etiam inclusa cum antheris semiexsertis. Ovarium triangularis trivalvis; valvis medio bisep-
tiferis; ovula numerosa bifariam producta.

N. stellaris, perianthii segmentis stellato-patentibus distinctis obovato-cuneatis mucronatis, corona perlutea patellari: margine plicato crenulato croceo intus albido, antheris omnibus subexsertis, foliis angusto-lineari-bus glaucescentibus obtusiusculis.

Narcissus stellaris. *Haworth in Swt. brit. flor. gar. no. 25. vol. 1. at the end, June 1, 1831. Narcissinearum monographia, edit. 2. 1831.*

Narcissus medio purpureus serotinus. *Park. parad. p. 76. t. 75. f. 4.*

Bulb rather small, ovate, tapering upwards, clothed with a brown membranaceous skin, which frequently more or less peels off. *Leaves* linear, bluntish at the point, glaucous, channelled on the upper side and keeled below, longitudinally striated with numerous prominent lines, more strongly keeled towards the base. *Scape* erect, slender, slightly compressed, acutely angled at the edges, faintly striated, very much tapering upwards. *Spathe* lanceolate, thinly membranaceous, longer than the peduncle, neatly striated, of a light straw colour. *Peduncle* nearly cylindrical, very obtusely angled, producing 2 or 3 shallow furrows. *Ovarium* below the flower, 3-celled, 3-valved, of a pale glossy green, each valve bearing 2 septums, on which two rows of crowded ovulæ are inserted; those are a little tapering to the base and rounded at the ends, of a glossy whiteness, shining like ivory. *Perianthium* petal-like: *tube* bluntly 4-angular, thick: *segments* spreading out like a star, quite distinct to the base, cuneately obovate, mucronate, tapering very much towards the base, longitudinally veined, the veins more or less branched. *Crown* very short, yellow at the base with a white ring a little

within the margin, which is somewhat plaited and crenate, and terminates in a margin of bright scarlet. *Stamens* 6, inserted in the mouth of the tube, the anthers all exserted, those are large, thick, and loaded with an amazing quantity of granular pollen. *Style* smooth, even with the anthers. *Stigma* 3-lobed, the lobes broadish and pustulate.

The present rare species of this pretty genus, which appears not to have been noticed before by any modern botanist, though well figured in *Parkinson's paradisus terrestris*, published in the year 1629: it must either have disappeared soon after, or has probably survived in some old gardens, where little notice has been taken of it; all the red or saffron edged species having been, in Linnæus's time, generally considered as the same, or nothing more than varieties of the same species: since that time, Mr. Curtis, Mr. Salisbury, Mr. Haworth, and Mr. Sabine, as private individuals, have paid great attention to this tribe, but no one has published any thing of consequence concerning them in this country, except Mr. Haworth. Some private individuals have also paid much attention to them within these few years, particularly the Reverend Mr. Ellicombe, of Bitton, near Bath, and Mr. Kent, who at one time had a fine collection of plants at Clapton, but now resides at Bathwick, Bath. Mr. Milne, at the Fulham Nursery, has also been collecting for some years all the species and varieties of *Narcissi* that he could procure, for his private collection, and has several scarce species; and Messrs. Young have a very good collection at their Nursery, at Epsom: there is also a large collection at the Horticultural Society's Garden at Chiswick.

In May last, we, in company with Mr. Haworth, saw in the Apothecaries Company's Garden at Chelsea, a few plants of the present species in flower, which Mr. H. immediately pronounced to be one figured in Parkinson's work; from those our drawing was made: the different species appear to thrive best in a sandy loam, and many will produce seeds; they may also be increased by offsets from the root.

For the explanation of the generic name, see folio 92, of the second series.



1. Tube spread open, to show the insertion of the Stamens.
2. Ovarium, terminated by the Style, and 3-lobed pustulose Stigma.



Laetia

Alb. & B. 1842

W. 1842

CAMELLIA japonica v. Sweetiana.

Sweet's painted-flowered Camellia.

Linnean Class and Order. MONADELPHIA POLYANDRIA.

Natural Order. CAMELLIÆ. DC. prodr. 1. p. 529.

CAMELLIA. Supra folio 2. series 2.

C. japonica, foliis ovatis acuminatis acutè serratis, floribus terminalibus subsolitariis. DC. prodr. 1. p. 529.

Camellia japonica. Linn. spec. 982. Willd. sp. pl. 3. p. 842. Botan. magaz. 42. Andr. reposit. 559.

Var. Sweetiana, foliis var. rubro-simplex subaffinis; petalis multiplicibus patentibus rubro et albo variegatis.

A beautiful upright, branching, evergreen Shrub, clothed with a glossy brown bark. *Leaves* ovately-oval, more or less acute; serratures pressed towards the margin, not of so dark a green as some varieties; and, at first sight, bearing a resemblance to the common single red, but of a larger size. *Petioles* hollowed a little on the upper side, and rounded on the lower, thickened towards the base. *Flower* bearing a strong resemblance to a beautiful variegated Rose, generally very double, more spreading than many varieties, and elegantly marked and variegated with white, blush, and a deep rosy red. *Calyx* imbricate: *outer sepals* composed of dry, brown, deciduous scales; inner ones of membranaceous tomentose ones, that are not quite so deciduous as the outer ones. *Petals* numerous, all slightly waved at the margins, and the inner ones somewhat crumpled, and narrower and smaller than the others; those on the outer circle being the broadest, irregularly variegated with whitish blush, and deep rosy red.

The present handsome variety of Camellia, we believe to be one of the most splendid that has ever been raised; at any rate, it is the finest that we have seen. It is of hybrid origin, the produce of the double striped, fertilized by the Pomponne variety; the foliage partakes most of the latter variety, but larger, and the plant, if not seen in flower, might be mistaken for a strong growing single one.

This is another of the numerous hybrid varieties that we fertilized, and raised from seed, at the Nursery of the late Mr. Colvill, several years ago, but has now flowered for the first time ; the plant is strong, and of a good size, so that young ones may soon be obtained from it.

The Camellia is now found to be as hardy, or even hardier than a Myrtle ; such a Winter as the present has been, they would have stood well in the open air, without the least injury ; and even the severest Winters, if planted near a wall, and protected by a mat. In the south and south-western parts of Britain, and some parts of South Wales, and Ireland, they will succeed well without any protection, they being more hardy than the common Bay-tree ; and we expect soon to see many of the fine varieties cultivated in sheltered Shrubberies with the other evergreen shrubs, particularly as the nurseries are becoming overstocked with them, so that the early introduced ones may be obtained at a reasonable price.

We do not intend to publish many varieties of Camellia, only now and then, when a fine new one comes out like the present one, and which has not been published before.

For the derivation of the generic name, see folio 2, of the second series.

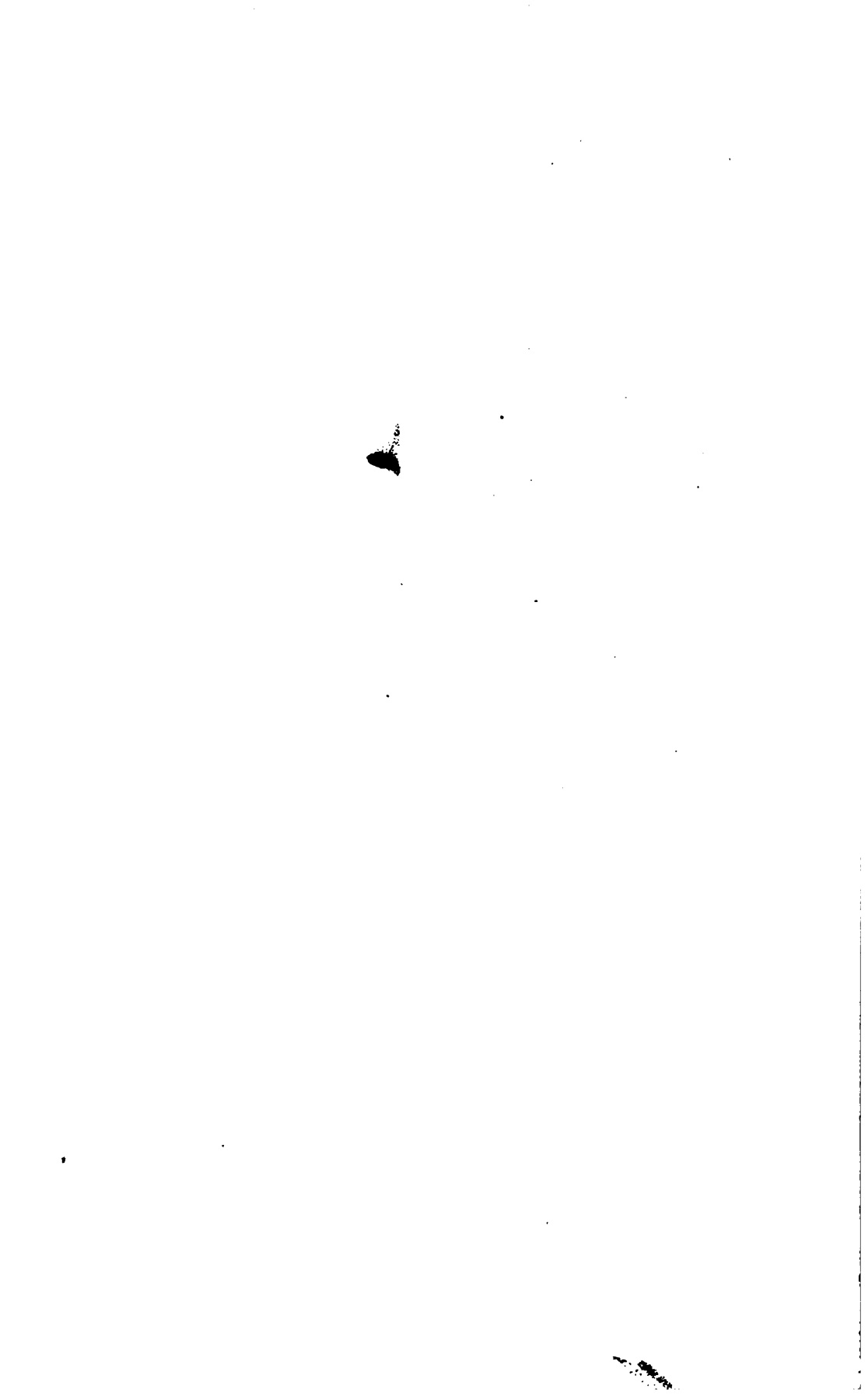
ERRATA.

Folio 112, overleaf, for *S. picta* and *S. atropurpurea*, read *S. straminea* and *S. atropurpurea*.

Folio 113, two lines from the bottom, for *Germen*, read *Ovarium* ; the same overleaf.

Folio 114, in synonym, instead of *Hortulanorum*, read *Swt. hort. brit. ed. 2. p. 368*.

Folio 125, overleaf, line 17 from the bottom, for *Geraniaceæ*, read *Geraniaceæ* ; and 6 lines below it, for *Vitigniæ*, read *Vitigineæ*.



TROPÆOLUM peregrinum.

Canary-Bird Flower.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. TROPÆOLEÆ. *Juss. mem. mus.* 3. p. 447. *DC. prod.* 1. p. 683.

TROPÆOLUM. *Calyx* 5-fidus, subbilabiatus; *labio superiore* basi calcarato. *Petala* plerumque 5, inæqualia; quandoque 2 v. nulla. *Stamina* 8, omninò libera. *Ovaria* 3, connata: *ovulis* solitariis, appensis. *Stylus* indivisus. *Stigma* trilobatum. *Carpella* 3, coalita, monosperma, suberosa. *Semen* exalbuminosum. *Radicula* minima.—*Herbæ* (Amer. Austr. inter grad. 10. et 37.) *plerumque scandentes*. *Folia alterna, petiolata, peltata, sæpiùs lobata*. *Petoli sæpiùs cirrhosi*. *Flores axillares, solitarii, pedunculati*. *D. Don Mss.*

T. peregrinum, foliis palmatis, petalis 2 superioribus maximis inciso-multifidis; cæteris 3 fimbriatis, calcare adunco. *D. Don Mss.*

Tropæolum peregrinum. *Linn. sp. pl. ed.* 1. p. 345. *ed.* 2. p. 490 *Syst. nat. ed.* 10. p. 998. *Jacq. schænb.* 1. t. 98. *Ruiz et Pavon fl. peruv. et chil.* 3. p. 76. *Bot. mag.* t. 1351. *Andr. rep.* t. 597. *Bot. reg.* t. 718. *Humb. Bonpl. et Kunth nov. gen. et sp.* 5. p. 252.

T. aduncum. *Smith tour.* 1. p. 158. in *Rees' cycl. in loco.* *DC. prod.* 1. p. 684. *G. Don syst. gard. et bot.* 1. p. 740.

Cardamindum quinquefido folio, vulgò *Malla. Feuill. peruv.* 2. p. 756. t. 42.

Herba odore et sapore omninò *Brassicæ oleraceæ*. *Radix* fibrosa, annua. *Caulis* plures, scandentes, teretiusculi, glaberrimi, lævissimi, virides, ramosi, bi v. tripedales, et sæpè altiores. *Folia alterna, petiolata, peltata, palmata, 5-7-loba, membranacea, venosa, glabra, subtùs vix pallidiora, venisque prominulis, basi dilatata exsculpta, pollicaria v. bipollicaria: lobis dilatatis, cuneatis, mucronulatis, pinnatifidis integerrimisve: posticibus divaricatis, margine rectis, æqualibus, subtruncatis: sinubus obtusis, basi membranâ angustâ connexis. Petioli filiformes, glabri, basi incrassati, unciales, plerumque flexuoso-convoluti, cirrhum mentientes. Flores axillares, solitarii, pedunculati, citrini, contortione pedunculi sæpè resupinati. Pedunculi filiformes, lævissimi, flexuosi, quandoque cirrhosi. Calyx monophyllus, membranaceus, 5-lobus, subbilabiatus; labio superiore trilobo, basi saccato-calcarato: lobis ovalibus, obtusis, nervosis, membranaceis: calcare è basi conicâ subulato, apice uncinato, obtuso, flore brevior, 3-5 lineas longo. Petala 5, unguiculata; 2 superiora limbo dilatato, cuneato, inæqualiter inciso-multifido, basi bidentato; dentibus extimis unidenticulatis: disco infernè maculis parvis, papillois, sanguineis consperso; 3 inferiora multò minor, spatulata, marginibus involutis cucullata, more Dionææ Muscipulæ folii fimbriata: dentibus setaceis, flexuosis, patentibus. Stamina 8, disco calycis carnoso inserta: filamenta subulata, glabra, apice mucronata: antheræ oblongæ, obtusæ, tetragonæ, biloculares: loculis parallelis, connatis, turgidis:*

valvulis distinctis, involutis, septum constituentibus, subinde antheræ quasi 4-loculares! demùm longitudinaliter solutis. Ovarium tricoccum: coccis hinc costis 3 elevatis rotundis nitidis instructis. Ovula solitaria, ab apice loculi pendula. Stylus trigonus, lævis. Stigma tridentatum: dentibus sub-recurvis. D. Don Mus.

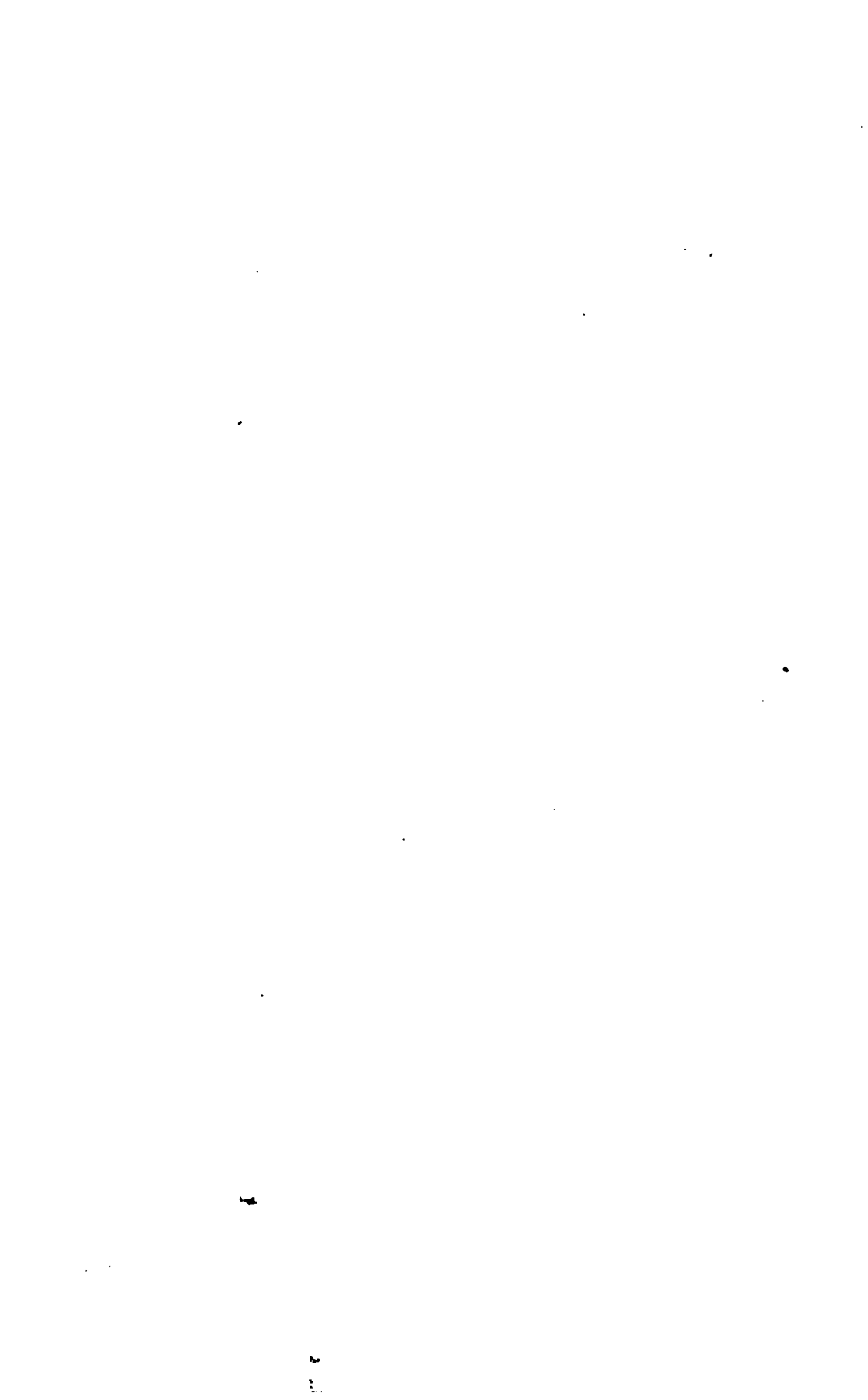
This is clearly the plant of Feuillée, and, consequently, the *T. peregrinum* of Linnæus, who took up the species entirely from that accurate author; although he afterwards confounded with it a totally different plant, which he had received from the celebrated Mutis. This substitution first occurs in the twelfth edition of the *Systema Naturæ*; and the plant is described more at length in the *Mantissa Altera*, published in 1771. It does not seem to be specifically different from *T. bicolorum* of the *Flora Peruviana*, and is distinguished by the greater equality of its petals, which are uniformly multifid, and by the calyx being furnished with lanceolate segments, and a long straight spur. The specimens, although marked "*T. peregrinum*," yet, as they are without the reference to the *Species Plantarum*, it is evident Linnæus did not consider them of sufficient authority.

In the Linnæan Herbarium, there is, also, what we take to be a cultivated specimen, and probably from the Paris Garden, of the same plant sent to the Swedish Naturalist, by Duchesne. Linnæus, in transcribing the synonym of Feuillée, has inadvertently written *quinquefolii folio*, instead of *quinquefido folio*; and this error, although a very trifling one, has been copied by all subsequent authors, affording one, among many examples that might be given, of the servile manner in which synonyms are copied. *T. peregrinum* varies exceedingly in its leaves, insomuch, that one, unaware of the fact, would be led to conclude that several species had been confounded. The present, and the figure in the Botanical Magazine, represent the two extremes. The plant we presume to be a native of Peru, where it has been cultivated from time immemorial, as an ornamental creeper, particularly in the Gardens of Lima, Chancay, and Huanuco. It is called *Malla* by the Indians, and *Paxaritos Amarillos*, i. e. yellow birds, by the Spaniards.

Our drawing was taken from a plant which blossomed in the Garden of Miss Reinagle, by whom it had been raised from Chile seeds, most probably obtained from some garden.

It is a hardy annual, but like many other South American plants, if kept in the greenhouse, it will flourish for several years. In all the really perennial species of this genus, the root is tuberous; *T. polyphyllum* of Cavanilles, and *T. leptophyllum*, have tuberous roots, procumbent stems, leaves deeply parted into numerous segments, in the former lanceolate, and in the latter linear; the flowers in both are yellow, the spur straight and tapering, and the petals cleft at the top. *T. ciliatum* of the *Flora Peruviana*, and *T. tenellum*, are remarkable for the shortness of the spur; in the former the petals are quite entire, and in the latter obo cordate. The leaves in both are parted into five or six obovate segments. The fringed bractæ, and stipule-like appendages of *T. ciliatum*, are so fugaceous that they are rarely present in the dried plant. *D. Don Mus.*

The generic name is derived from *tropæum*, a trophy; the leaf resembles a buckler, and the flower a empty helmet, of which trophies were formed.





L. D. Smith del.

Pub. by J. D. Smith, March, 1882.

W. H. Smith & Co.

HESPERIS speciosa.

Beautiful Rocket.

Linnean Class and Order. TETRADYNAMIA SILIQUOSA.

Natural Order. CRUCIFERÆ. *DC. syst. nat. v. 2. p. 139.*

SUBORDO II. NOTORHIZÆ. Cotyledones planæ, incumbentes. Radicula dorsalis. Semina ovata, immarginata.

Tribus VII. SISYMBRÆE seu Notorhizæ Siliquosæ. Siliqua bilocularis, bivalvis, dehiscens, elongata, linearis teres aut tetragona stylo abbreviato, aut rarissimè breviuscula stylo elongato. Dissepimentum lineare. Valvulæ elongatæ planæ, concavæ aut carinatæ, omnes dehiscentes. Semina in loco quoque uniserialia, ovata aut oblonga, subtriquetra, immarginata. Cotyledones planæ, incumbentes, (o ||). *DC. syst. veg. nat. v. 2. p. 438.*

HESPERIS. *Calyx* clausus, bisaccatus. *Petal*a unguiculata, limbo patente obtuso aut emarginato. *Stamina* libera, tetradynamæ. *Glandulæ* virides, subannulatæ, ad basin staminum lateralium. *Siliqua* stricta, subtetragona aut compressa : stigmatibus 2 erectis sessilibus conniventibus terminata. *Semina* oblonga, subtriquetra, pendula, 1-serialia. *Cotyledones* planæ, incumbentes (o ||).—*Herbæ annua, biennæ perennesve; radice fibrosa; caule tereti erecto aut diffuso. Folia ovato-lanceolata aut oblonga, dentata aut lyrato-runcinata. Plantæ pleræque pilis aliis lymphaticis simplicibus ramosissve, aliis præsertim ad apicem pilis glandulosis instructæ et indè quasi bituminosæ. Racemi terminales, ebracteati, erecti. Pedicelli filiformes, post anthesin non incrassati. Flores albi aut purpurascences, sæpè versicolores, interdum odorati. DC. syst. veg. nat. v. 2. p. 446.*

Sect. II. DEILOSMÆ. Petalorum limbi obovati læti.

H. speciosa, caule suffrutescente ramoso basi squamoso, ramis foliis scapisque stellato-pubescentibus, foliis inferioribus spathulatis obtusiusculis integerrimis aut raro subdentatis basi valde attenuatis : caulinis floriferis oblongo-ovatis acuminatis basi rotundatis sessilibus, pedicellis calycibus duplo brevioribus, petalorum laminis obovatis, siliqua tetragona villosissima, stigma capitata apice indentata.

Stem suffrutescent at the base, branching : *branches* short, clothed at the base with numerous rigid taper-pointed white scales, and with the leaves, scape, and peduncles, thickly clothed with stellate bunches of hairs. *Leaves* alternate, spathulate, or spathulately lanceolate, bluntish at the point, very much attenuated towards the base ; lower ones subdentate ; those on the scapes or flower-stems, sessile, ovate or oblongly ovate, tapering to a long slender point, broadest and rounded at the base. *Scape* simple, leafy, terminated by a close corymb of flowers, which soon lengthens out to a raceme. *Flowers* of a rosy purple, about the size of *Hesperis matronalis*. *Pedicles* very short, rather more than half the length of the calyx. *Calyx* of 4 deciduous sepals, with membranaceous margins, unequal at the base, clothed with a short white pubescence ;

the two outer ones longest, bluntish at the point, and concave inwards. *Petals* 4, spreading; the lamina broadly obovate, and rounded at the end, entire, much veined; unguis slender. *Stamens* 6, erect, two shorter than the others. *Young pod* sessile, somewhat quadrangular, densely villous. *Style* very short. *Stigma* very large, capitate, indented at the top.

Our drawing of this pretty and elegant plant, was made from a fine specimen sent us from the collection of the late Robert Barclay, Esq. of Bury Hill, as long ago as the 6th of April, 1830; but as we had neither pods or seeds, and could not make it agree with any described genus, we kept the figure and description, without publishing it, till the present time, and have not yet been able to procure them. Mr. D. Cameron informed us that he had raised it three years before from Siberian seeds; that it was a beautiful little plant, quite hardy, and perennial, and had never flowered till that Spring. It never produced seeds at Mr. Barclay's; those from which the plants were raised, were received from Mr. Hunnemann, who had them direct from Dr. Fischer.

We have now, for the present, arranged it under this genus, with which it agrees in every respect, as far as we can make out, except the two-lobed stigma; the stigma being capitate, and not lobed in the present species; it is also somewhat related to *Parrya*, (*Neuroloma* DC.) but differs in its leafy scape and four-sided siliqua, agreeing with it in the hard white scales where the leaves have dropped off. It is in habit and pubescence, also, related to *Stevenia*, but differs in the form of the leaves on the scape, and in its four-sided siliqua and much larger stigma; when the perfect seeds and siliqua have been examined, it will probably be found different enough to form a new genus, and to belong to a different tribe, or even a suborder. We cannot find a described species in any genus that is at all related to it, with which it will agree; we have, therefore, given it as a new species, and should we hereafter meet with it again in a proper state for examining with the ripe pods and seed, we will then endeavour to set all our doubts to rights.

Hesperis is derived from *εσπερος*, the evening, several of the species being only scented at that time, particularly in the first section of the genus, to which *H. fragrans* of Number 61 of our first series belongs, as does also *H. tristis*, and *H. alyssifolia*.



1. Calyx. 2. The 6 Stamens dilated at the base, 4 long and 2 shorter. 3. The young Siliqua, which is tetragonal and densely woolly, showing the short Style, and capitate Stigma, which is slightly open at the end.



HÉLENA grácilis.

Slender Helena.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Sect. V. NARCISSEÆ. Radix bulbosa. Spatha monophylla 1-v. multiflora. Perianthium tubulosum, petaloideum, 6-partitum, coronatum.

HELENA. *Spatha* 1-3-flora. *Perianthii* segmentis in stellam expansis, tubo multo brevioribus: *tubus* grossus valde compressus, angulis obtusis, fere ut in Narcisso, at longior, magisque compressus: *filamenta* omnia fere omnino toto tubo adnatæ: *antheræ* demum spiraliter tortæ, tres superne parte tubi inclusæ, tres tubi semisuperantes. *Stylus* tubum æquans stigmatibus tribus rotularibus. *Ovarium* triloculare, trivalve: valvis bisepitiferis: *ovulæ* numerosæ, bifariam insertæ, obovato-spathulatæ, cætera ut in Narcisso. Charactere gracili sumptus.—*Habitus* in omnibus gracilior multo quam in ultimo, vel sequenti genere. *Folia* linearia fere plana, lineam lata et viridia seu glauca.

* *Flavissima* floris, foliis viridioribus.

H. gracilis, 1-3-floris, scapo gracili compresso superne ancipito læve, spatha pedunculo brevior inferne integra, perianthium flavissimum: segmentis ovatis acutis valde imbricatis horizontalibus saturatiore patula acetabuliformi, ore plicatim eroso-crenulata marcescente 5-6-plo longioribus.

Haworth in Swt. brit. flor. gar. series 2. in end of volume 1. edit. 2. p. 120.
Narcissus gracilis. *Bot. reg.* t. 816.

Narcissus lætus. *Redout. liliac.* 428. non Salisb.

Root bulbous, clothed with a glossy brown skin, the outside surrounded by numerous loose scales, which sheath the stem a good way up. *Leaves* several, dark green, the broadest about 4 lines in width, deeply channelled on the upper side and rounded below, striated longitudinally with numerous longitudinal slender lines, from 12 and a half to 14 inches in length, elongated linear, nearly of equal breadth from the base to the point. *Scape* erect, rather slenderish, in our specimens about 16 inches in height, flattened or slightly rounded, sharply but shortly 2-edged, striated longitudinally with innumerable slender lines, which extend to the spathe. *Spathe* rather more than an inch and a half in length, not very broad, membranaceous, and extending along way up the tube, nearly to its end. *Peduncles* slender, sharply 3-angled, from an inch and a half to nearly 3 inches in length. *Ovarium* below the perianthium, smooth, dark green, triangular, 3-celled, the cells each producing 2 septums, on which the seeds are longitudinally arranged, one row on each: *ovulæ* numerous, tapering to the base and widening upwards, of an obovately spathulate form: *tube* nearly double the length of the seg-

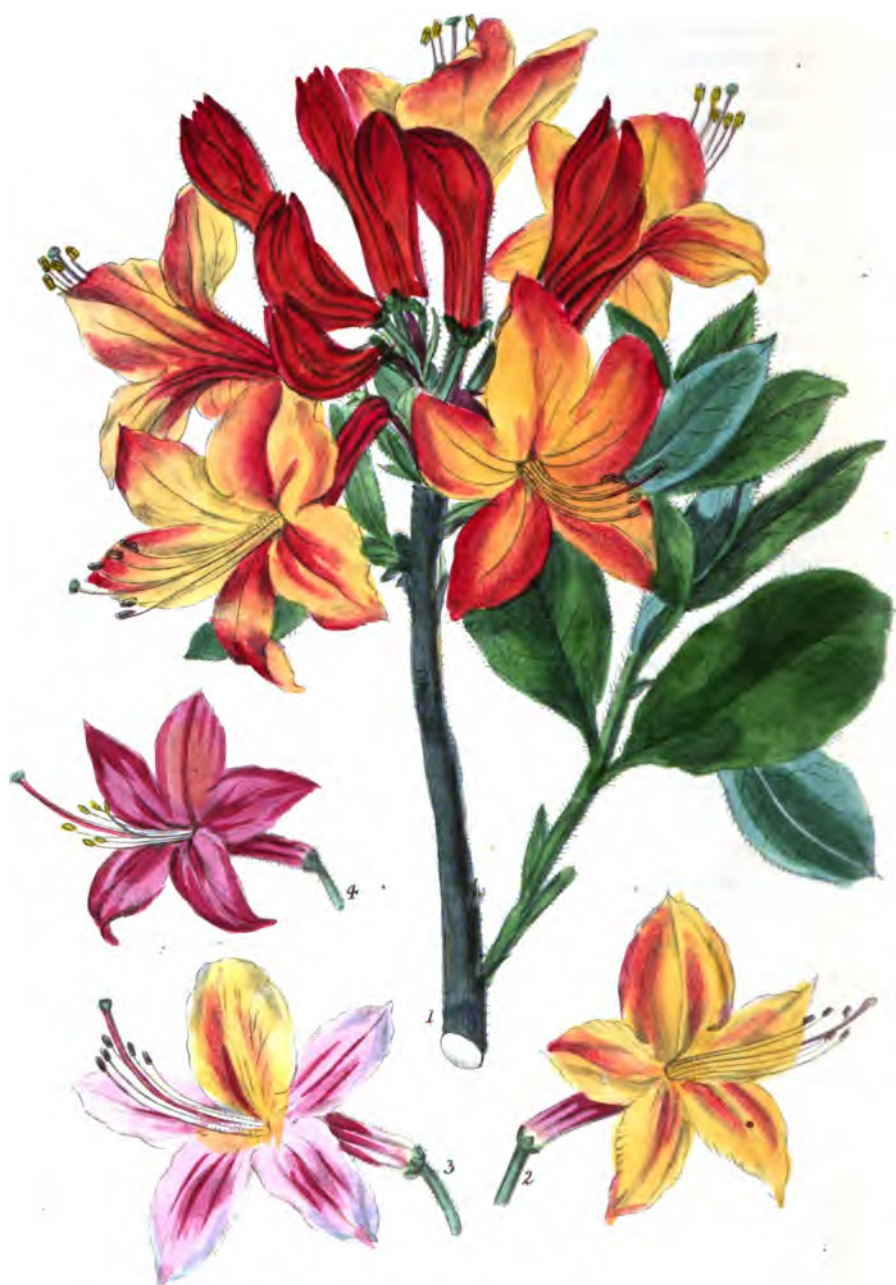
ments, flat on one side, and nearly subsemicylindrical on the other: *limb* composed of 6 horizontally spreading, elliptic, acute segments, of a bright yellow. *Crown* nearly flat, more or less plaited or undulate, scarcely crenulate at the edges, 5 or 6 times shorter than the segments of the perianthium, of a bright yellow. *Stamens* 6, 3 inserted in the tube a little below the throat: *filaments* short, smooth, attached to the anthers about half way up their back, and included in the throat; the other 3 attached in the throat, the anthers exerted: *anthers* 2-lobed, bursting in front for the exclusion of the pollen. *Style* smooth, slightly exerted. *Stigma* small, 3-lobed, the lobes rounded and slightly pustulose, flatly spreading.

The present genus is nearly related to the true genus *Narcissus*, but differs in the 3 lower stamens being inserted and included in the throat, the anthers of the 3 upper ones more or less exerted; the longer and more compressed tube, and the shorter segments of the limb: it agrees with it in its short spreading crown, and robust tube. It is also related to *Hermione*, in bearing only 2 rows of ovulæ in each cell, but differs in its short spreading crown, the thickness of its tube, and the narrowness of its foliage; it is also allied to *Jonquilla* in its short spreading cup and form of the leaves, but differs essentially in the form of its ovulæ, in the present being obovately spatulate, and in *Jonquilla* being subreniform. There is no other genus in the section of *NARCISSINEÆ* to which it has any need to be compared.

When a boy, we recollect well that a playmate of ours had another species of this genus, with a pale sulphur-coloured flower, with several other species and varieties of *Narcissi* in his garden; he had some dozens of it; the crown was the shortest of any we ever saw. It is still, perhaps, existing in some garden in the same village, which is Cockington, near Torquay, the villagers there being very fond of the cultivation of flowers.

The generic name is a poetical one, derived from *Helena*, the daughter of Leda, by Jupiter, in the shape of a swan, the most beautiful woman of her time; married to Menelaus, King of the Lacedemonians, to whom she bore Hermione. Afterwards, stole away by Paris, which occasioned the war between Greece and Troy, and the destruction of the latter.

1. Perianthium spread open, to show the insertion of the 6 Stamens; 3 of them inserted below the throat, and 3 in the mouth, with the anthers exerted. 2. Ovarium. 3. Style, terminated by the 3-lobed fimbriate Stigma.





RHODODÉNDRON ornatum.

Ornamental Azalea.

Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICEÆ. *D. Don flor. nepal. p. 148.*

Subordo III. RHODORACEÆ. D. Don loc. cit. p. 152.

RHODODENDRON. Supra fol. 10, series 2.

Sect. II. AZALEA. Corolla basi tubulosa, infundibuliformis. *Stamina* 5. Frutices v. Arborescentes, *plerique deciduis; ramis piloso-hispidis. Folia oblonga, ovata v. elliptica, pilosa. Flores corymbosi, speciosi, colore variis.*

R. ornatum, foliis obovato-ellipticis lanceolatisve acutis apice cartilagineo-mucronatis basi attenuatis; supra glabris nitidis margine ciliatis: nervo subtus setigero; pedunculis villosis-viscosis, corollis externe pilosis, calycis dentibus brevibus inæqualibus obtusis, staminibus longe exsertis.

Azalea pontica-rubescens. Goven in litt.

1. *α. speciosum*, leaves elliptically obovate, green on both sides; peduncles rather longer than the bractes; tube of the corolla of an orangy red, upper segment of the limb yellow, the others of a reddish orange.
2. *β. incarnatum*, leaves narrower, elliptical, scarcely inclining to obovate; peduncles about the length of the bractes: tube blush with red lines: upper segment of the limb yellow tipped with white, the others pale pink tipped with white.
3. *γ. luteum*, leaves elliptically obovate, pale green on the upper side, paler and slightly glaucescent underneath; peduncles scarcely longer than the bractes; tube of the corolla tinged with red, limb pale yellow, slightly tinged with blush, the upper segment of the deepest yellow.
4. *δ. roseum*, leaves elliptic or lanceolate, green on the upper side, and glaucescent underneath; bractes longer than the peduncles; tube and segments of the limb of a pale rose: upper segment yellow edged with rose.

Stem shrubby, much branched: *branches* short, rigid, thickly clothed with woolly hairs. *Leaves* deciduous, elliptically obovate, tapering to the base, and fringed at the edges, of a bright green on both sides; the upper side smooth and glossy, but bearing a few hairs; underneath rather paler, and clothed with bristly hairs along the mid-rib, which bend inwards, feather-nerved, and tipped with a short brown horny mucrone. *Petioles* short, flattened on the upper side, and rounded below, very hairy. *Corymbs* terminal, many-flowered, surrounded at the base by nume-

rous bractes, that are oblong or spatulate, concave inwards, rounded at the points, membranaceous, deciduous; between those are other filiform ones. *Peduncles* cylindrical, thickly clothed with hairs, and with a viscous substance, about the length of, or a little longer than the bractes. *Calyx* short, 5-toothed, the teeth unequal, blunt. *Corolla* tubular, with a 5-parted spreading limb: tube bluntly 5-angular, of a deep orangy red, thickly clothed with short stiff hairs: upper segment of the limb broadest, yellow, the others of an orangy red, or red tinged with yellow. *Stamens* 5, *filaments* very long and slender, ascending, villosely hairy above half-way up, the upper part smooth and glossy, attached to the back of the anthers a little above the base. *Ovarium* 5-angular, densely hairy. *Style* about the length of, or rather longer than the stamens, hairy at the base, and smooth upwards, pale red. *Stigma* a green head.

The whole of the above description is taken from the variety *a speciosum*, and all the varieties have their different distinctions mentioned underneath the specific character, in English; this, with a flower of each in the figure, will readily distinguish them from each other.

We received all those handsome varieties from the fine collection of hybrid Azalea's, and Rhododendrons, that have been raised from seed at Highclere; the specimens were sent to us the latter end of May, 1830, by J. R. Gowen, Esq.; the seeds were raised by Lord Carnarvon's gardener, from Azalea viscosa *β rubescens*, fertilized by *A. pontica*, under Mr. Gowen's own inspection, who informs us that the gardener is very clever at raising these seedlings, which have always been under Mr. Gowen's observation till the present time; for the following account we are obliged to him. "There are also many of the same age from *A. coccinea* by the same male parent, and it is difficult to say which sport the most, and produce the most brilliant colours. I am inclined to think that *A. calendulacea* would be a better plant to supply pollen than *A. pontica*, being a later flowerer, more disposed to sport, and more elegant in its habit, but its progeny would not possess that delightful fragrance which belongs to the crop from *A. pontica*, and which is very fine in some of the varieties now flowering here."

"The crop between the magnificent Rhododendron *arboreum* and *R. catawbiense*, is quite hardy; hundreds of them have passed the Winter here, in very exposed situations, without protection and without injury."

"I should observe, that when the foliage of the seedling follows closely that of the male parent *A. pontica*, the flowers also approximate to the male type; on the other hand, when the foliage follows the female, so do the flowers. I think there is about an equal proportion preserved in the seedlings."

For the derivation of the generic and sectional name, see fol. 10. of the second series.



1 var. *speciosum*. 2 var. *incarnatum*. 3 var. *luteum*. 4 var. *roseum*.





SARRACENIA minor.

Smallest Side-saddle Flower.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. SARRACENIÆ. *Swt. hort. brit. add. p. 446. Ed. 2. p. 18.*

SARRACENIA. *Calyx duplex persistens: exterior 3-sepalus: interior 5-sepalus. Petala 5, decidua. Stamina numerosa. Stigma latum, peltatum: margine 5-angulum. Capsula 5-locularis. Placenta 5-angularis centralis.*

S. minor, foliis minoribus tubulatis erectis v. suberectis longitudinaliter striatis unilateraliter lato alatis, valva concava extus carinata breve mucronata, petalis ovatis discoloribus sepalis paulo longioribus, stigmate lobis incurvis.

Sarracenia minor. Nuttall. Mss. Walter flor. carol. 153.

Perennial. Leaves several from the same root, varying from 6 to 12, according to its size, straight, or sometimes a little curved, small and slender, scarcely at all inflated, of a glossy green when young, but becoming somewhat brown by age, tubular, longitudinally striated with purple lines, and bearing a broad wing on one side, with a thickened margin that becomes of a reddish brown by age; outer leaves more curved than the inner ones, which are straight, slenderer, and bearing a much broader wing than the outer ones: *mouth* open: *tube* clothed inside with innumerable shortish hairs, which bend downwards, and occasion a sort of silky appearance: *lid* at first erect, tapering to a slender point; when full grown ovate, mucronate, acute, hollow on the inside, and densely clothed with short hairs, sharply keeled at the back, strongly nerved, smooth. *Scape* in our specimen, longer than the leaves, cylindrical, smooth. *Flower* terminal, solitary, the smallest of the genus yet seen. *Calyx* double, smooth: outer series of 3 sepals, that are short, ovate, bluntish, concave on the upper side, thick and coriaceous, with membranaceous margins: inner series of 5 sepals, large and spreading, broadly ovate, somewhat acuminate, but blunt at the ends, obsoletely veined, green on the upper side, slightly tinged with purple underneath and at the margins. *Petals* 5, spreading, obovate, rounded at the

ends, alternate with the lobes of the stigma, and with the sepals, reflexed at the sides where they pass under the edge of the stigma, of a bright purple on the under side, and green tinged with purple on the upper. *Stamens* 32 in our specimens, inserted in the receptacle with the petals, surrounding the ovarium: filaments broad at the base, tapering to a slender point, which is inserted in the back of the anthers: *anthers* of two distinct lobes. *Ovary* superior, oval, smooth, green. *Style* short, smooth. *Stigma* very large, peltate, 5-lobed, or occasionally 6-lobed, the sides reflexed, with a shallow pit at the summit it is fixed to the style, and from which several veins proceed, which terminate at the end of the lobes; *lobes* acute, uneven at the edges, terminated in a sharp point, which is hooked inwards; the stamens are hid by the stigma, so that they cannot be seen till that is removed.

Our drawing of the present plant was taken in May, 1830, from a specimen sent us from the collection of the late Robert Barclay, Esq. who had received it the year before from Mr. T. Nuttall, who sent it as the true *S. minor*, and mentioned that it was a native of Georgia; Mr. Cameron afterwards informed us that one plant had produced 12 leaves, and another 6, by the month of December following.

This plant appears to have been confused with *S. variolaris* by all Botanists since Michaux published one under that name, but it is not in the least related to it, as may be seen by our figure, *S. variolaris* being a large strong-growing plant with a green flower, and the present a weak slender-leaved plant, and the smallest flower perhaps of the genus: and being a native of so warm a climate, it will probably require a little protection to preserve it from the severe frost, either a frame, or greenhouse, or by the side of a running stream in a wood or garden, where it may be readily supplied with a good covering of dried leaves in severe frosty weather, but it will be most likely a long time before it will be for sale in this country, except some person go to Carolina or Georgia, and send home a quantity of it.

The generic name was given by Tournefort in honour of Dr. Sarrazin, a French Physician residing in Quebec, who sent it him from Canada; it is named side-saddle flower, from its large stigma resembling a saddle.



1. A small plant in miniature. 2. Stamen detached. 3. Ovary, terminated by the Style, and large umbrella-formed Stigma, with its five lobes curved inwards.



Lupinus

Pub. by J. Ridgway April 1842

Woolly

LUPINUS Marshallianus.

Marshall's hybrid Lupine.

Linnean Class and Order. MONADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. *DC. prodr.* 2. p. 98.

Subordo I. PAPILIONACEÆ.—*Tribus* V. PHASEOLÆ. *Supra* fol. 12. ser. 2.

LUPINUS. *Supra* folio 12, series 2.

- L. *Marshallianus*, tomentoso-pilosis, caulibus suffrutescentibus patentibus ramosus, foliis inferioribus 9-14-foliolatis; superioribus 8-5-foliolatis: foliolis subellipticis v. lanceolatis acutis sericeo-tomentosis, stipulis petiolo adnatis apice attenuatis piloso-ciliatis, floribus in verticilli congestis, bracteis angustis longe attenuatis flore longioribus.

Stem suffrutescent, much branched, the branches spreading, if not supported, clothed with soft woolly and silky hairs, as is every other part of the plant, leaves, petioles, stipules, bractes, and calyx. *Leaves* varying much in their number of leaflets, on the lower part of the stem from 9 to 14, and decreasing in number as they approach the flower stem: *leaflets* varying from elliptic to narrowly lanceolate, sharp-pointed, clothed with a silky tomentum, channelled on the upper side, regularly and flatly spreading. *Peduncles* longer on the bottom leaves, and frequently purple, sheathing the stem at the base, particularly on the young shoots before the flowers appear: upper ones shorter, and less purple, tapering upwards, the leaflets proceeding from a knot at the point. *Stipules* joined a considerable way up the petiole, but ending in loose, more or less elongated acute points. *Spike of flowers* from 8 to 18 inches in length, the scape between the flowers much angled, and more or less tinged with purple. *Flowers* crowded in whorls, with now and then a single one between, generally 6 in a whorl, but not so many towards the top. *Bractes* very long and slender, and tapering to a long point, extending beyond the flowers. *Pedicles* short, or scarcely any. *Calyx* 2-lipped; upper lip ovate, two-lobed: lower one oblongly ovate, acute, bearing a small bracte on each side. *Vexillum* blue, white at the base. *Alæ* or *wings* pale blue, striped with darker. *Keel* acute, upper

part purple, below bluish white, parted at the base, and producing a ear on each side, a little above the base. The 10 Stamens, all united in a tube at the base, and distinct at the points. *Anthers*, 5 small round globular ones, and 5 oblong.

This curious hybrid production of Lupine was raised by C. Marshall (Gardener at Mrs. Langtey's, Southborough, Kingston, Surrey,) from the seed of *L. lepidus*, as we are informed by him: as the plant is now suffrutescent, and the habit and foliage being so much like *L. tomentosus*, that species must have been the other parent: a plant sent to us, and which was planted in our garden, has stood the Winter, without having a leaf injured, and is become quite suffrutescent and bushy, like the male parent. In Mr. Marshall's account of it, he says the plant continues in bloom till the sharp frost sets in, and that it had thirty spikes in flower on it at one time, from 12 to 18 inches in length, although it had been moved late in Spring. This plant, when dormant, produces a knot, at the end of each shoot, and joint, and up the stem, clothed with leaves; and there can be no doubt but those would all soon make plants, if taken off and planted in the ground, so that it will soon become plentiful.

We have seen flowers of several other curious hybrids of this genus, sent to us at the same time as the present, and others in some other collections, particularly in that of Messrs. Allen and Rogers, Nurserymen, King's Road, and Battersea; in the latter Nursery they are chiefly grown; some of those are very beautiful, and might readily be taken for real species, if their origin was not properly determined.

For the derivation of the generic name, see folio 12, of the second series.



1. Calyx. 2. Vexillum. 3. The two wings. 4. Keel. 5. Stamens laid open, to show the distinction between them.

GLADIOLUS cochleatus.

Spoon-lipped Corn-flag.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDÆ. *Brown prodr.* 1. p. 302.

GLADIOLUS. *Inflorescentia* spicata, rarè sola. *Spatha* bivalvis, oblonga (modò longissima). *Perianthium* tubuloso-sexfidum, irregulare vel subæquale: *tubi faux* brevis turbinata v. abruptè cylindracea atque longa: *limbus* plerumque nutans. *Stamina* 3, secunda (adscendentia). *Styli* 1: *stigmata* 3, cuneato-ligularia, conduplicata, integra. *Capula* membranacea, ovato v. oblonga, trigona. *Semina* biserialia, alato-paleacea, numerosa, cumulata.—*Herbæ subpedales v. ultra tripedales.* Bulbotuber ovatum vel rotundum vel depressius orbiculatum; exuviis contextu maximè vario. *Folia* collateralia, plura, linearia vel latius gladiata, nervo medio principi costata, vel subtetraquetra, v. decussata modo cartilagine crassiore marginata. *Caulis* teres rarè angulosus, simplex vel subramosus. *Flores* grandes, speciosi, dissiti, rarè parvi densi. *Stylus* gracilis, tristriato fili-formis. *Semen* alato-paleaceum, *cujus testa sicca tenui ampla subvacua albumine parvo facta è cavitate in marginem comprimitur.* Ker *Iridearum* Genera 1827. p. 129. *parum mutatum.*

G. cochleatus, foliis angusto-linearibus binerviis strictis rigidis glaucescentibus elongatis; apice attenuatis: marginibus et nervo medio prominentibus, scapo simplicis gracili elato, segmentis perianthii patentibus elliptico-ovatis obtusis: superioribus minoribus intus rubro-pictis: inferioribus adscendentibus cochleato-concavis, tubo brevi spathis multum brevior.

Stem slender, in our plant 20 inches and a half in length, somewhat glaucous, and striated downwards, leafy all the way up. *Leaves* varying in length upwards, somewhat glaucous, narrowly linear, elongated, and tapering to a slender point, straight and rigid; *lower ones* 2-nerved, the nerves and margins thickened and prominent, the middle nerve very much so on both sides: about a line and half in breadth at the base, sheathing the stem a considerable distance up: *upper ones* narrower and shorter, concave inwards, more glaucous. *Flowers* 2 in our specimen. *Spathe* 2-valved, outer one much longer than the inner one, but both longer than the tube of the perianthium, which they clasp nearly to the top, broadly lanceolate before the flower expands, afterwards rolling inwards and appearing narrower, glaucous, and striated with numerous small stripes. *Perianthium* snowy white, with a very short tube; *limb* 6-cleft: 3 upper segments about half the size of the lower ones, and more erect, but slightly bent backwards; outer one of the three, wedge shaped, marked with an open compass-shaped red mark,

which nearly joins two crimson lines which proceed to the base, and there become connected: two inner elliptically ovate, also marked with an open compass-shaped red mark, below this are two red marks also, running down the centre of the segment, and extending nearly to the edge at the upper part, which gives the appearance of a heart, and between the stripe and the edge they are slightly stained, which gives a faint idea of a feather: two outer lower ones very large and spreading, elliptically inclining to ovate, the points somewhat reflexed, and becoming in a day or two slightly undulate; those are also marked with two red lines, from a little below the middle to the bottom, the upper line shortest: *lower segment* obovately ovate, spoon-shaped, hollow, broad at the point, becoming a little undulate at last. *Stamens* 3, slightly ascending, shorter than the style: *anthers* linear: *pollen* straw-coloured. *Style* white. *Stigma* 3-cleft: the segments very slender at the base, but dilated at the ends.

In the plant when growing the leaves are all rigid and straight, those with their tops bent down in our figure, is so done, to show the length and form of the leaf: the hollow spoon-shaped, ascending, lower segment of the flower, appears to distinguish the present from every other species; there are several with somewhat similar foliage, figured in Jacquin's *Icones*, but all with very different flowers; the one figured in the forty-second volume of the *Botanical Magazine*, fig. 2585, under the name of *G. debilis*, is the nearest related to the present one, of any we have seen, but the segments of the flower are all broadly ovate and acute, (oval it says in description), the outer segment of the three upper ones is as large as the lower one; in ours it is the least in the flower, and cuneate; the two next in ours are elliptic, a little inclining to ovate, and marked as described above; all ours are obtuse, and some, particularly the lower one, emarginate when first expanded: in the other, the two upper ones are ovate, marked at the base with a three-lobed carmine spot, according to the description, but it would be difficult to make out the three lobes in the figure; the two lower side ones in this are very broad and flatly spreading; the lower one also spreading, but a little smaller; all of a snowy white, with no spots or marks: in ours the two outer lower ones are elongated, elliptical, scarcely inclining to ovate, and marked with lines as mentioned above: the front one of ours is almost horizontal, or ascending a little, hollow and spoon-shaped, from which our specific name is derived; the leaves in both are very narrow, and both strongly nerved; in ours they are erect and rigid; in the other by the figure, they appear weak and flaccid: the flowers of both are of a snowy white, except the coloured marks on some of the segments.

The plant from which our figure was taken, we received from Mr. H. B. Page, Botanic Garden, Southampton, on the 10th day of March last, who informs us that he received it from the Cape two years since.

The generic name is derived from *Gladiolus*, a small sword, a dagger, or poniard, from the shape of the leaves of several species of this genus.



1. The 3 Stamens.
2. Style, terminated by 3 slender Stigmas, dilated at the points.



SCILLA præcox.

Early-flowered Squill.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. ASPHODELÆÆ. *Brown prodr.* 1. p. 274.

SCILLA. *Perianthium* profunde 6-partitum, petaloideum, rotatum, æquale, patens, subdeciduum. *Stamina* 6, æqualia. *Filamenta* filiformia v. basi dilatata plana, basi segmentis inserta. *Antheræ* posticæ. *Stylus* filiformis, erectis. *Stigma* simplex. *Ovarium* subrotundum, triloculare, tri-valve, pluriovulare. *Capula* valvis medio septiferis: loculis oligospermis. *Semina* subglobosa atra.

S. præcox, scapo angulato striato, racemo subcorymboso v. elongato, pedunculis flore duplo v. triplo longioribus, bracteis obscuris.

S. præcox. Willd. *spec.* 2. p. 128. Link. *enum. hort. ber.* 1. p. 327. Swt. *hort. brit. edit. I.* p. 419. n. 9. *Ed. II.* p. 528. n. 14.

Hyacinthus germanicus liliiflorus stellatus. Pass. *hort. hyem.* 12. c. ic. bon.

Bulb smallish. *Leaves* 2 or 3, tapering to the base towards the bulb, considerably curved inwards where they emerge from the ground, oblong, hollow on the upper side, tapering to the point into a callous mucro, glaucous, striated with numerous longitudinal lines, about 2 or 3 inches in length, when the flowers begin to expand, becoming longer afterwards, and nearly 9 lines in breadth. *Scape* somewhat angular, inclining to flattish, and strongly striated with numerous lines; of a bright purplish red colour; when first flowering, about three inches in height, afterwards extending to the height of 5 or 6, the pedicles extending in length all the time, some of the lower ones becoming at last of a great length. *Pedicles* 2 or 3 times longer than the flower when in bloom, and of a red colour, produced from the top to the bottom of the scape, some even from the axils of the leaves. *Flowers* about 10 lines across, considerably larger than *S. bifolia*, about the size of *S. amænula*, but less than *S. amæna*, or *S. sibirica*, of a fine dark blue, stellately spreading: *segments* oblongly lanceolate, distinct: *buds* red on the outside, before expansion. *Bractes* blunt, minute, quite inconspicuous. *Stamens* 6, inserted near the base of the segments, and opposite to them. *Filaments* inserted in the back of the anthers, eared at the

base before bursting. *Ovarium* rounded, 8-celled, 3-valved: *valves* bearing 6 to 8 ovula. *Style* upright. *Stigma* a small blunt head.

Our drawing of this beautiful little early flowering bulb, was made from some fine specimens of it, that were in flower in great perfection in March last, in the fine collection of bulbs cultivated by A. H. Haworth, Esq.; the figure was drawn rather too soon, as the raceme lengthened out considerably afterwards, and became much more elegant, the footstalks also of the flowers lengthening out at the same time, which gave the plant altogether a much more graceful appearance; this plant was first introduced, we believe, several years ago, in the collection of the Apothecaries' Garden at Chelsea, but it has now disappeared from it for some time, and we do not know any collection that it is in at present, except that of Mr. Haworth.

This certainly ranks among the prettiest of our hardy Spring bulbs, very few can come up to it for beauty, and its present scarcity makes it still the more desirable; and should it not seed, it is likely to continue scarce for some time: according to Passares it is a native of Germany, as he has named it in the work above referred to, (*Hyacinthus germanicus liliiflorus stellatus*.) and his figure agrees precisely with ours: like the rest of this interesting genus, it succeeds best in a rich light sandy soil, and may be occasionally increased by offsets from the bulbs, or from seeds, which may perhaps ripen occasionally.

The generic name is derived from σκίλλα, a sea onion, *Plut.* 9. 74. most probably after *Scilla maritima*.



1. The 5 Stamens, front and back view: the back, or side view, to show how the filament is inserted in the back of the anther. 2. *Ovarium*, terminated by the *Style* and *Stigma*.



52. Smith, Del.

Printed by J. B. Rogers, May 1855

17. 18. 19.

HELLÉBORUS purpurascens.

Purplish Bear's-foot.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *DC. syst. veg. nat. v. 1. p. 127.*

Tribus IV. HELLEBOREÆ. Æstivatio calycis et corollæ imbricata.

Petala nunc 0, nunc 5-10 (nectaria Lin.) irregularia sæpiùs bilabiata nectarifera; *calyx* sæpiùs coloratus petaloideus. *Carpella* polysperma sæpiùs libera, suturâ longitudinali intùs dehiscentia, interdum in pericarpium multiloculare coalita; *semina* horizontalia, placentis secus suturam dispositis adfixa. — *Caules* herbacei; *folia* alterna, nunc radicalia, nunc sæpius caulina; *flores* variè dispositi, colores omnes admittentes, dupli modo pleni, filamentis nempe in petala plana, aut antheris in petala bilabiata evadentibus. *DC. syst. veg. v. 1. p. 306.*

HELLEBORUS. *Calyx* persistens 5-sepalus, sepalis subrotundis obtusis magnis sæpè viridibus. *Petala* 8-10 brevissima tubulata infernè angustiora nectarifera. *Stamina* 30-60. *Ovaria* 3-10. *Stigmata* terminalia orbiculata. *Capula* coriaceæ. *Semina* duplici serie disposita elliptica umbilicata. *DC. prodr. 1. p. 46.*

H. purpurascens, foliis radicalibus subtilis subpubescentibus palmatisectis; segmentis basi cuneatis apice 3-5-lobis, caule bifloro, foliis floralibus subsessilibus, calycis sepalis subrotundis coloratis. *DC. syst. veg. nat. v. 1. p. 318. Prodr. 1. p. 47. excl. syn. Bocc. mus. 2. p. 26. t. 11. f. 2. R. R. ex Tenore prodr. 1823. p. 26. spec. distincta.*

H. purpurascens. *Waldst. et Kit. pl. rar. 2. p. 105. t. 101. Pers. syn. v. 2. p. 107. Spreng. syst. 2. p. 658. Swt. hort. brit. ed. 2. p. 7.*

Leaves and *Flower-stems* several from the same root. *Spathes* 2, surrounding the base of the petiole or leaf-stalk, one longer than the other, keeled at the back, and terminating in a small point. *Leaves* extending above the flower-stalk, particularly in a strong plant. *Petiole* lengthening out as the plant advances in strength, somewhat bluntly angular near the base, a channel proceeding from the leaf a considerable way down the stem, more or less spotted, or tinged with purple, particularly as the weather becomes warmer, clothed with small distant hairs. *Leaves* palmately divided: *root ones* underneath slightly pubescent: *segments* 3 to 5-lobed, and wedge shaped at the base: *leaflets* on short footstalks, tinged with purple on the upper side; more or less broadly or narrowly lanceolate, terminating to a sharp point, upper part sharply serrated, but entire a considerable way above the base. *Flower-stem* erect, branched

in our specimen: *branches* deeply angular, 1 or 2-flowered, leafy, the leaves nearly sessile, trifoliate, and not so deeply serrate; those below the flower sometimes simple. *Flowers* more or less green or purple, according to the state of the weather, or mildness of the climate: in this also depends the size of the plant, as well as flowers. *Calyx* persistent, of 5 sepals, roundly oval, more or less livid purple at the back, according to the mildness of the season when in flower: inside green, tinged with purple. *Petals* varying from 8 to 10, according to the size of the flower, sometimes even less, tubular, narrowing downwards, and honey-bearing, green above, and shadowing downwards to a pale yellow. *Stamens* varying more or less, according to the size of the flower. *Ovaries* varying from 3 to 6 (rarely 7) from Waldstein and Kitaibel: terminated with a slender *Style* and an orbicular *Stigma*.

Our drawing of this species was taken from a plant in flower, in the beginning of March last, which had now flowered, for the first time, in the Apothecaries' Company's Garden, at Chelsea. Mr. Anderson looked for the date when the seed was sown, which was as long ago as the year 1820; as it flowered so very early in Spring, and at the same time the weather being rather severe, the flower-stem, and the stem-leaves, and flowers, became stunted by the cold; this accounts for the difference between our figure and that in *Flora Hungarica*, and in the size and colour of the flowers. Native of woods in Hungary.

The best situation for this plant, would be that of a warm sheltered wood, where the dead leaves, with which it might be covered in Winter, would protect it from the cold, and cause it to grow luxuriantly in Spring, and produce larger and better coloured flowers.

The generic name is derived from *ελλειβορος*, a poisonous plant, that is said to be used to cure all the most malignant disorders.



1. Stamens, surrounded by the tubular, honey-bearing petals. 2. Petal detached.
3. Stamen detached. 4. The 4 Ovariums, terminated by the Style, and orbicular Stigma.



J.P. Smith del

Pub by J. Ridgway May 1837.

Walden:re

ÀJAX pumilus.

Small 6-lobed Ajax.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Sect. V. NARCISSINÆ. Radix bulbosa. Spatha monophylla. Flores umbellati, multiflori v. solitarii. Perianthium tubulosum petaloideum, 6-partitum, coronatum.

AJAX. *Supra folio* 101. ser. 2.

Div. * *Minores*, flaviflores, tubo longiusculo.—† Perianthii segmentis semiexpansis.

A. pumilus, foliis latiusculis planis glaucis patentibus, perianthii segmentis anguste obcuneatis distinctis, coronâ ore sexlobâ patulâ minutissime rugosiusculâ.

Ajax pumilus. *Haworth in Sweet's British Flower Garden, at the end of vol. 1. second series.* p. 1. edit. 2. p. 1.

Ajax cuneiflorus. *Salisb. in Hort. trans.* 1. p. 346. *Haw. in Succ. suppl.* p. 118.

Narcissus pumilus. *Pass. hort. hyem.* p. 8. c. ic. *Salisb. prodr.* p. 220.

Bealer hort. Eyst. vern. 3. ord. fol. 5. f. 4.

Narcissus cuneiflorus. *Schult. syst. v. 7. pars. 2.* p. 937.

Narcissus hispanicus medius luteus. *Theatrum Flora,* t. 20.

Bulb small, covered with a thin brown bark. *Leaves* considerably spreading, glaucous, broadish, slightly concave, attenuated downwards towards the root, blunt at the point, very much striated. *Scape* rather longer than the leaves, flattened downwards, deeply striate. *Spathæ* membranaceous, extending to the end of the tube, tapering to the point. *Ovarium* bluntly triangular, of a deep green, tapering downwards to the short pedicle. *Perianthium* tubular; *tube* green on the outside, and yellow on the inner: *segments* 6-parted, distinct, oblongly lanceolate, acute, spreading, about the length of the crown, but scarcely extending to the ends of the lobes, but a little longer than the tube: *crown* inflated upwards, open at the mouth, 6-lobed, the lobes unequally toothed, somewhat plaited, and a little rugged on the inside. *Stamens* 6, of the same length; *filaments* inserted in the base of the tube, white, tapering upwards, inserted into the back of the anthers, a little above the base: *anthers* linear, all inclosed in the tube. *Style*

white, and smooth, tapering upwards. *Stigma* 3-lobed, the lobes rounded.

Mr. Haworth has now restored the original name given by Passares, in his *Hortus Hyemalis*, or work on Winter flowers, above 200 years since; it was also the first name given to it by R. A. Salisbury, in his *Prodromus stirpium in Horto ad Chapel Allerton*, published in 1796; though he afterwards changed it to *A. cuneifolius*, which was also adopted in *Haworth's Supplementum Plantarum Succulentum*, published in 1819, at page 113; there is also a *pumilus*, published in *Redoute's Liliacæ*, t. 409, with a small white flower; but as that is nearly related to *N. tenuior*, it is now placed in another genus with it: our species is a native of Spain.

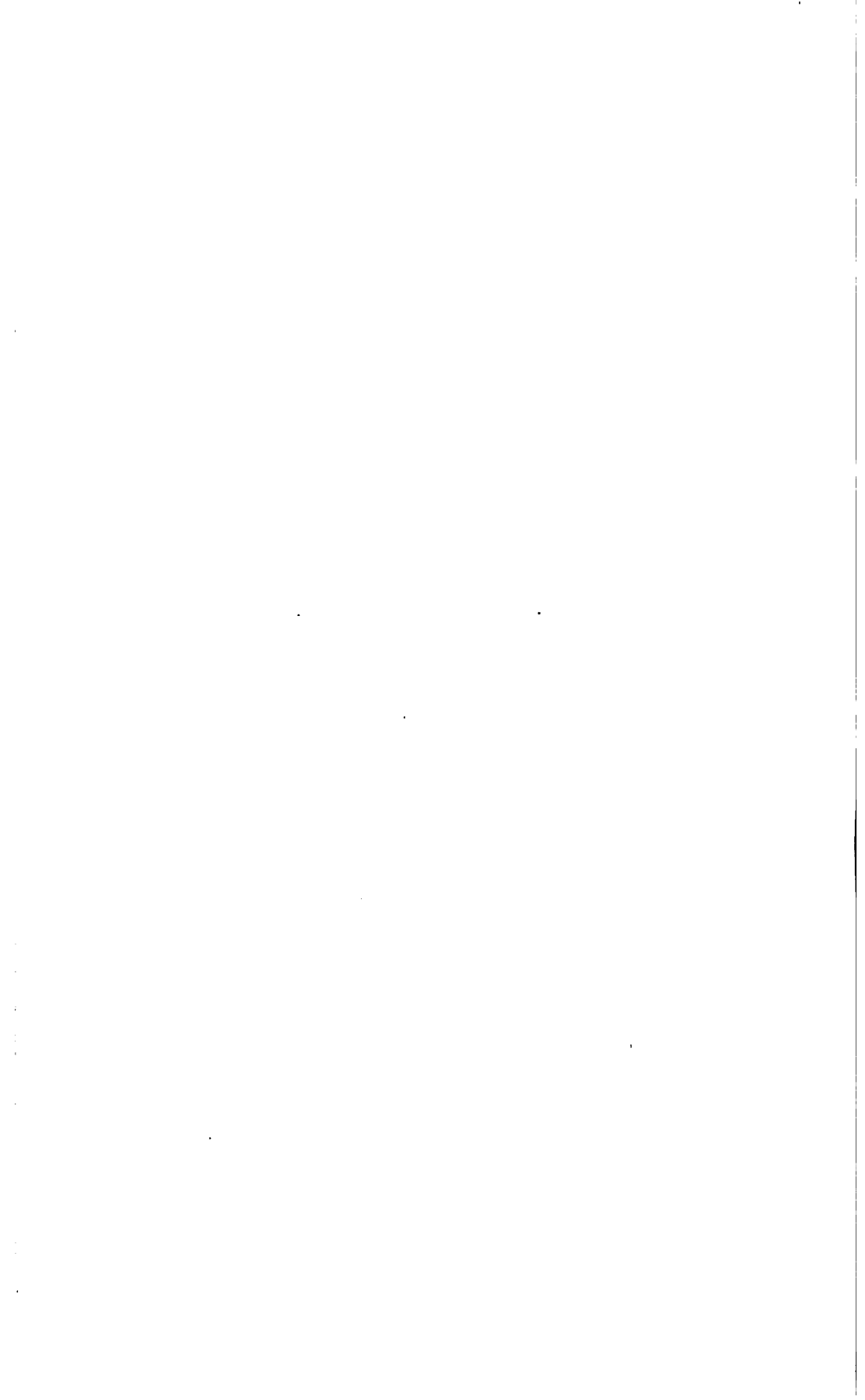
The present species, though having been known to be cultivated for so long a time in the gardens of the curious, still continues to be scarce in the collections about London: for the opportunity afforded us of giving this figure, we are obliged to A. H. Haworth, Esq., who possesses a few bulbs of it; from its early and free flowering, it is a desirable bulb for the garden, and its flowers are produced early in March if the weather prove mild, and continue in flower for a long time; and, like the other species of this genus, succeed well in a rich loamy soil; and if a little light rotten dung be mixed with it, they will grow all the stronger, and produce larger flowers; with a little trouble they would most likely produce seeds, by applying some pollen to the stigma when in bloom; by these means they may become more plentiful; and the sooner they are sown after they are quite ripened and hardened, the quicker they will be up; for if they are not sown till Spring, they will seldom make their appearance till their next growing season; they are also increased by offsets from the bulbs.

For the derivation of the generic name, see folio 101, of the second series.



1. The 6 Stamens of equal lengths, inserted in the base of the tube. 2. Ovarium, terminated by the Style, and 3-lobed Stigma.





SPREKELIA formosissima.

Crimson Jacobea Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo III. HIPPEASTRÆ. Scapus cavus. Tubi faux arcta. Semina testa nigra. *W. Herb. bot. mag. vol. 52.* 2806. p. III.

SPREKELIA. *Perianthium* corollaceum, 6 partitum, inæqualiter patentes: *tubus* subnullus: *segmentis* inferioribus deplexis; superioribus reflexis. *Stamina* 6. *Filamentis* declinatis, recurvatis, fasciculatis, pariter membranâ connexa et perianthii basi inserta. *Ovarium* obtuse trigonum, triloculare, trivalve: *Ovula* plana, in valvis biseriatim imbricata inserta. *Stylus* filamentis longioribus apice adscendentibus. *Stigma* tripartita: segmentis obtusis reflexis papillosis.

Sprekelia. *Laur. Heist. Descriptio novi generis plantæ rarissimæ et speciosissimæ Africanæ ex Bulbosarum Classæ.* p. XII. et XIII. *Brunsv.* 1753. *Herbert Appendix on Amaryl.* p. 34-35.

S. formosissima. *Herbert Appendix*, p. 35. *Swt. hort. brit. edit. 2.* p. 509.

Amaryllis formosissima. *Linn. spec. p.* 420. *Act. holm.* 1742. p. 93. t. 6.

Willd. spec. 2. p. 52. *Curt. bot. mag. t.* 47. *Redout. Liliac. t.* 4.

Lilio Narcissus Jacobeus flore sanguinea nutante. *Dill. elth. t.* 162. f. 196.

Knorr. Thesaur. t. 99.

Lilio Narcissus III. *Trew flor. imag. t.* 24.

Bulb roundish, with a long neck, thickly clothed with thin brown scales. *Leaves* annual, green, varying from a quarter to half an inch in breadth, and from 6 to 14 inches in length, elongately linear, tapering to a point, channelled down the centre, and keeled at the back, striated with numerous longitudinal lines, generally erect when the plant is in flower, afterwards more or less spreading. *Scape* hollow, one or rarely two-flowered, with an acute angle on one side, and a blunt one on the other, broadest below, and tapering more or less towards the flower, also striated with numerous lines. *Spathe* surrounding the peduncle, about 3 inches in length, succulent before the flower expands, afterwards becoming dry and membranaceous, strongly ribbed, and purple when fresh, point extending considerably above the ovary, frequently burst a little below the point, and the point closed, sometimes open all the way to the end. *Peduncle* about two inches long, enclosed in the spathe, straight, hollow, and striate, forming a sort of division or knot where it and the spathe proceed from the scape. *Ovary* bending

inwards from the peduncle, bluntly 3-sided, dark green, 3-celled, and 3-valved: the ovula flat, seated on two septums in each valve, closely pressed to each other. *Perianthium* corollaceum: *tube* scarcely any: *segments* 6, of a bright crimson, green at the base, all strongly striated: upper segment broadest, proceeding direct from the ovarium, straight a little way up, then ascending a little to the point, after being expanded two or three days it becomes reflexed: two side ones inside of the upper one, considerably narrower than the other four, spreading, and bending round like a bow, attenuated a little towards the base: 3 lower segments hanging down, their points curved inwards towards the scape: middle one rather shortest and broadest, enclosed above half way with the outer ones. *Stamens* 6, inserted into the base of the perianthium: *filaments* bright red, about four inches in length, thickest at the base, and tapering to a slender point, which is inserted into the anther considerably above the base: *anthers* linear before bursting, channelled on both sides through the centre, nearly an inch in length before bursting, crimson purple: *pollen* straw-coloured. *Style* four inches and a half in length, bright red, more than half an inch longer than the filaments, point a little ascending. *Stigma* 3-cleft, segments spreading, a little recurved, obtuse, pustulose.

Our particular reason for giving a figure of this plant was, because it is so seldom seen with two flowers on the same scape, which was the case with ours, and another scape with a single flower produced from the same bulb, at the Nursery of Mr. Dennis, Grosvenor Row, Chelsea; where we have since seen two other bulbs, producing two flowers on a scape, but no other scape. We see the same thing in *Dillenius Hortus Elthamensis*, above referred to: and the Hon. and Rev. W. Herbert mentions in his account of the genus that he had seen it twice with a two-flowered scape.

The present plant will endure our winters in the open ground, if planted about four inches deep, and covered with a mat or some litter in severe weather, particularly by the side of a dry wall; or the bulbs may be taken up and dried in Autumn, and planted again at the latter end of February or beginning of March, if the weather allow.

This genus was first named by Heister, in the work already quoted, in honour of Baron M. De Sprekelsen, sometime Secretary to the Republic of Hamburgh, a great promoter of Botany, and is also adopted by the Hon. and Rev. W. Herbert.



1. The 6 Stamens inserted into the base of the perianthium, showing their long red filaments, and the two-lobed linear anthers and their insertion. 2. Ovarium terminated by the Style, and 3-cleft blunt pustulose Stigma. 3. Cross cut of the Ovarium to show how the ovula are imbedded in the 3 valves. 4. Slice cut off the outside to show how the ovula are placed on the septums.



—M. L.

Pubby JPilgway Ave M.L.

—M. L.

ÀJAX *albicans*.*Greatest Spanish White.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* AMARYLLIDÆ. *Brown prodr.* 1. p. 296.*Div. I.* *Radix* bulbosa. *Flores* spathacei, umbellati, raro solitarii.*Sect. V.* NARCISSINÆ. *Radix* bulbosa. *Spatha* monophylla. *Flores* umbellati aut solitarii, pluri aut multiflori, aurei, lutei, sulphurei, albescentes, albi, nivei et viridescenti. *Perianthium* tubulosum petaloideum, 6-partitum, coronatum.*AJAX.* *Spatha* uniflora. *Perianthium* 6-partitum patens: tubo turbinato; coronâ grandi poculiformi perianthii lacinii subæquanti, lobata, crenata, serratave, fere vel plus longitudine laciniarum sæpissimè imbricatarum perianthii laciniae. *Ovarium* triloculare, trivalve; *valvis* biseptiferis. *Ovula* in valvis bifariam raro 4-fariam insertæ. *Stamina* 6: *filamentis* basi perianthii insertis, filiformibus strictis, æqualibus: *antheræ* posticæ.—*Herbæ* (Europæ et Orientali) *bulbosæ*; bulbis *tunicatis inferne rotundatis; superne conicis; foliis semper bifariis loratis vel ensiformibus obtusis sæpè infernè carinatis grosse nervoso-striatulis, supra plano-canaliculatis plus minusve glaucis, ante anthesin fere semper erectis. Scapis semper unifloris.**Div. ***.* ALBIFLORES. *Floribus* mediocribus seu majusculis, primo sulphureis demum coronâ longissima.*A. albicans*, foliis erectis loratis obtusiusculis glaucis striatis: subtus carinatis: supra concavis: marginibus crassiusculis, spatha tubo multo breviori, perianthii lacinii ovato-lanceolatis patentibus tubo coronum brevioribus, corona lobulato-crenata sulphurascente.*Ajax albicans.* *Haworth Monog. Narciss. in Swt. brit. flor. gar. n.* 25. *ser. 2. p. 2. edit. 2. p. 8.**Pseudo-Narcissus hispanicus maximus albidus.* *Park. par. p.* 100. *t.* 101. *f.* 1.

Bulb obversely top-shaped, producing numerous roots from the base. *Stems* 3 from the same bulb, two of them producing flowers; main stem 4-leaved, the other two 3-leaved; all inclosed in a white sheath at the base. *Leaves* from the sheath to the point, from 9 to 10 inches in height, upright, or a little spreading, ending in a bluntish point, considerably glaucous; and striated with deep lines at the back, which is also keeled; the upper side somewhat concave, and the margins rather thickened. *Scape* somewhat flattened, striated with various stripes, and somewhat ancipitous, tapering upwards, and becoming slender just at the spathe. *Spathe* membranaceous, connected at the base, inclosing the lower part of the peduncle, considerably shorter than the tube, ovate, scarcely acute, but bluntish. *Peduncle* about 10 lines in length, or probably sometimes less. *Ovarium* glossy. *Perianthium* corollaceum, tubular, with a long tubular crown; *tube* about 9 lines long, top-shaped, tapering to rather a slen-

der base, seated on the ovarium : *segments* 6, ovately or oblongly lanceolate, horizontally spreading when in perfection, almost an inch and a half in length, of a pale straw colour when first expanded, gradually changing to white : *cup* above 2 inches and a half in length, at first pale yellow, changing to straw-colour and almost to white ; edge of the crown slightly lobed and crenulate, and a little crispate. *Stamens* 6 : *filaments* all about the same length, inserted in the base of the perianthium, about an inch and 2 lines in length, half the length of the tube, slender, of a glossy whiteness : *anthers* linear, 2-lobed, inserted by their back to the filaments a little above their base. *Style* seated on the ovarium, longer than the stamens, tapering upwards from the base, of a bright straw-colour. *Stigma* 3-lobed, the lobes rounded and pustulose.

Our drawing of this rare and newly introduced species, (which appears to have been lost to our gardens for many years,) was taken from a bulb with 2 flowers sent us on the 11th of April last, from the fine collection at Bitton, belonging to the Rev. H. T. Ellicombe ; Mr. Haworth, also, possesses several bulbs of it, which we saw in flower in his garden this Spring. We have also seen it in other collections about London, introduced from Holland this year, under the name of *moschatus* ; but the *moschatus* of the Linnean Herbarium, which we examined last year, is a very different plant ; it is the *moschatus* ♂ of the Botanical Magazine, *tab.* 1800, and the *candidissimus* of Redoute's Liliacées, *tab.* 188. The present plant, according to Mr. Haworth's Monograph of Narcissi, is a native of Spain ; it begins flowering the beginning of April, and some will be in flower at nearly the end, depending partly on the time that the bulbs are planted in the ground, or whether they have been left in altogether.

The present species, as well as many other strong growing ones, thrive best in a rich sandy loam ; and if there is a little dry rotten dung mixed with it, they will thrive all the better, and attain a greater height. The greater part of this genus seed freely, particularly if a little pains be taken with them when in flower ; or if the various kinds of bees be plentiful when they are in flower.

For the derivation of the generic name, see folio 101, vol. 2, of the second series.



1. The 6 Stamens inserted in the base of the perianthium ; the filaments very long, attached to the back of the anthers, a little above the base. 2. Ovarium terminated with the Style and 3-lobed Stigma.



HERMODACTYLUS longifolius.

Long-leaved Snake's-head.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

HERMODACTYLUS. *Spatha* univalvis aut bivalvis acutis rigidis persistentibus foliiformibus longitudine floribus expansis; pedunculo et ovario inclusis. *Perianthium* 6-partitum: segmentis exterioribus multo majoribus reflexis: interioribus minimis, basi involutis cucullatis aut angustis planis apice abrupte attenuatis angustissime elongatis. *Stamina* 3, basi perianthii inserta: *filamenta* compressa distincta: *antheræ* basi affixæ, biloculares, longitudinaliter dehiscentes. *Styli* brevi. *Stigmata* 3, petaliformia, magna, bifida, patentia, acutissima. *Ovarium* variabile, oblongum v. subrotundo-pyriforme.

H. longifolius, vagina radicali longi submembranacei foliis tecti inclusi, foliis radicalibus longissime extensis crassius regulariter quadrangularis striatis glaucis: scapo brevo basi subinflato apice acuto, unifloro, perianthii segmentis exterioribus obovatis emarginatis reflexis: interioribus basi cucullatis apice attenuatis acutis, stigmata margine lacerato-serrata.

Hermodactylus. *Tournefort. Cor.* p. 50. *Salisb. Hort. trans.* v. 1. p. 304. *Λογχίτης. Dioscorides.*

Root tubers varying from 1 to 2. *Sheaths* tightly surrounding the leaves at the base, varying in length, white, of a soft feel to the touch, somewhat inclining to membranaceous, but rather succulent, points soon decaying. *Leaves* very glaucescent, almost white, quadrangular, longitudinally striated; root ones frequently 3 to 4 feet in length, the largest above half an inch in circumference, and 3 lines in breadth across the angle in the widest part, the angles sharp edged. *Flower-stem* in our plant, from the ground to the top of the flower, about 9 inches in length. *Scape* smooth, rounded. *Scape-leaf* rather inflated towards the base, where it surrounds the scape, tapering upwards, and raising only to the base of the flower. *Spathe* leaf-like, persistent, rigid, 1-valved, extending to the top of the flower when expanded, somewhat ventricose over the ovarium, but tapering upwards to a sharp point. *Ovarium* oblong, 6-lined, tapering to the flower, considerably below it. *Perianthium* with a short tube, deeply 6-parted: 3 *large outer segments* about 3 inches in length, narrowing to the base, curved a little inwards from the 2 sides, of a green colour, slightly tinged with purple nearly to the bend, and a pale yellow line extending down the centre to the base; at the bend they are considerably curved backwards, and 2 greenish white marks in the bend, edged with dark purple, from there to the point broadly obovately-ovate, with a slight notch at the point, or retrace, of a bright velvet on the upper side, edged with green; back green, and hollow in the recurved part: 3 *small inner segments* very small, and curved inwards at the base, and a considerable way up, so as to make them cucullate, or hollow; from this it becomes abruptly narrow, and terminates to a very slender point. *Stamens* 3, inserted in the base of the perianthium, and pressed close to the back of the stigma: *filaments* flat, and inserted in the base of the anthers, which are linear, 2-lobed, and burst in front to discharge their yellow pollen. *Style* short. *Stigmas* 3, deeply 2-cleft, keeled on the inside, and hollow at the back, lacerately-sawed at the margins: *segments* spreading right and left,

sharp pointed. *Capsule* oblongly-elliptical, tapering considerably towards the base, and a little towards the point; it is now nearly ripened, and is rather more than an inch and a half in circumference in the largest part, and an inch and a quarter in length.

Our drawing of this singular plant, which has now flowered with us for the first time, was brought to us from Naples, by Mr. Charles Ridgway, under the name of *Iris tuberosa*, but as we had another very different species at the same time, we were certain that they could not be the same; and we now believe there are several other species confused under that name, from the short description "*foliis tetragonis*" being given to them all; but there are three very distinct species easily recognised, by their foliage, roots, form of the 3 large segments of the flowers, and also of the 3 small ones; another is figured in "*Swertius Florilegium*," which is apparently a fourth, that is taken up also by Morison.

At the time we were supplied with the tubers of this plant, by Mr. C. Ridgway, about three years ago, we received, at the same time, several other bulbs and tubers from him; the greater part of those are now growing in our garden, in a south border, where they are protected by a mat in Winter. *Narcissus neglectus* flowered with us this Spring, which was one of them.

2. *H. repens. Creeping-rooted Snake's head*, perianthii segmentis exterioribus apice rotundatis integerrimis: interioribus minimis setaceis uncinatis inclusis, foliis tetragonis acutis scapo longioribus, spatha unica lanceolata ventricosa.

Iris tuberosa. Sibthorp. Flor. græc. v. 1. t. 41. Redoute liliac. t. 48. Habitat in Arcadia et in Agro Eliensi. Sibthorp.

Root tuberous, fingered, white, 2 at the base of the plant like small fingers; from this proceeds a runner, densely covered with shaggy chaff, terminated by several smaller tubers, so that by this means it must increase very fast. *Stem* or *scape* erect, about a foot in height, simple, leafy, and 1-flowered. *Leaves* tetragonal, acute, pale green, apparently about 18 inches in length? *Radical sheaths* membranaceous and cracking, surrounding the leaves and scape, dilated at the base of the stem, somewhat inflated, and alternate. *Spatha* 1-glumed, lanceolate and ventricose. *Flower* terminal, nearly erect, pale green, inflated: *Perianthium* segments, on the exterior not bearded, apex broad and rounded, of a brownish black; interior ones very small, broadest near the base, ending in a very slender point, that is hooked, and inclosed, yellowish: tube filiform and elongated. *Stamens* 3, pressed close to the back of the stigmata, yellow. *Style* yellow. *Stigma* greenish yellow; segments bifid and repand.—*From Flora Græca description and figure translated into English.*

2. *H. bispathaceus. Common Snake's-head*, foliis angustis glaucis tetragonis, floribus bispathaceus.

Iris tuberosa. Curt. bot. mag. t. 531. Link enum. v. 1. p. 480. Smith herb. in coll. Linn. soc.

Root tuberous, 2-fingered: *Leaves* very narrow, glaucous, about a foot or more in length. *Spathes* 2, or 2-glumed, surrounding the peduncle, ovary, and tube of the flower; outer segments cuneate, retuse; the inner small segments, very slender at the base, and widening upwards, the sides clasping inwards, tapering to an elongated taper point, capsule rounded, tapering to the base like a pear.

The generic name is derived from *ἡμερας*, Mercury, and *δακτυλον*, a finger, from the roots resembling fingers.



1. The 3 small Segments curved inwards at the base and a considerable way up, to show their cucullate form, terminated abruptly to a long slender point. Stamens 3, attached to the base of the Perianthium, from whence they grow, the anthers pressed close to the Stigma.
2. Short Style, with the 3 long cleft Stigmata; one only shown full size, to show its cleft Stigma; the other 2 cut off near the base, where they are a little fringed.
3. Ovary nearly full grown.



SANGUINARIA grandiflora.

Large-flowered Puccoon, or Bloodwort.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. PAPAVERACEÆ. *DC. syst. veg. nat. v. 2. p. 69.*

SANGUINARIA. *Sepala* 2 ovata, concava, petalis breviora, caduca. *Petala* 8 (v. 12.) oblonga, alterna interiora angustiora. *Stamina* 24 v. 36. : *filamentis* filiformibus : antheris linearibus bilocularibus basi insertis. *Ovarium* 1, oblongum, compressum ; stigmatibus crassiusculo bisulcato persistente coronatum. *Capsula* bivalvis, oblongo, utrinque acuta, valvis deciduis, placentis 2 persistentibus.—*Herbæ* (Boreali-Americana) *succo sanguineo foeta*, radice *perenni ad collum è gemmâ bivalvi folium unicum v. binum scapumque uniflorum quotannis agente.*

Truncus subterraneus, vulgò Radix, est acris narcoticus, etiam emeticus, externè applicatus escaroticus, a medicis Americanis sæpè et feliciter adhibitus. Confer *Schæpf. med. amer. bot.* 85. *Smith trans. lond. med. soc.* 1. p. 179.

S. grandiflora, foliis reniformibus basi spathaceis glaucescentibus subseptemlobatis reticulato-venosis : supra glabriusculis : subtus pallide rubentibus ; lobis basi rotundatis ; 3 superioribus trilobis ; inferioribus sublobatis obsolete lato crenatis, sepalis ovatis concavis apice retusis rubentibus, petalis octo elliptico-ovatis obtusis concavis basi breve attenuatis stellato-patentibus.

Sanguinaria grandiflora. *Rosc. flor. illus. seas. t. 8. Swt. hort. brit. edit. 2. addend. p. 585.* See PAPAVERACEÆ.

Root tuberous, variable in form, branching round in various shapes and sizes, oblique or horizontal, filled with foetid juice, of a red colour. *Real roots* fibrous, slender. *Leaves* about 3 inches or rather more across from the base, and 2 long from the petiole to the end : proceeding direct from the root, always 2 in the present species, the scape raising between them : reniform or kidney-shaped, generally 7-lobed, glaucescent on both sides, reticulately veined : a strong vein proceeding up each lobe from the pedicle : upper side somewhat glabrous ; under one more or less tinged with red ; when young, the leaves, footstalks, and buds, are all quite of a red colour, which distinguishes it from the other two species with which we are acquainted : 3 upper lobes more or less 3-lobed, the opening between them broad, and rounded at the base, generally entire : lower ones broad, more or less lobed, or thinly notched with broad shallow rounded notches. *Petioles* or leaf-stalks, rounded below, tapering upwards, slightly flattened, but not furrowed where it is connected to

the leaf, pale red. *Scape* extending above the leaves, round, pale red, leafless, terminated by a large starry white flower, when exposed to the sun. *Calyx* of two deciduous sepals, which drop off as soon as the flowers expand: *sepals* ovate, concave, obtuse, and slightly notched at the point, of a beautiful rose-colour when young, but continuing to become paler as they increase in size. *Petals* 8, broadly elliptical or oval, tapering from a short way up to the base, and rounded at the points. *Stamens* 24, in 8 sets, generally 3 in a set; *filaments* filiform, variable in length, inserted into the base of the anthers: *anthers* linear, 2-celled, and opening longitudinally for the exclusion of the yellow pollen. *Ovarium* sessile, somewhat flattened on each side, tapering at both ends, glaucous. *Stigma* cleft at the point.

Our drawing of this fine species of *Sanguinaria* was taken from a plant sent us by Mrs. Roscoe, of Toxteth Park, near Liverpool: it was first introduced by Mr. J. Lyon, from Carolina, about the year 1812, under the name that we have adopted: it is also published by the same name by Mrs. Roscoe, in her *Floral Illustrations of the Seasons*. Owing to the cold weather this Spring, our plant did not produce such large flowers, as it generally does; and our artist never saw them in a perfect state, so that the figure is not so good as it ought to have been.

This species is chiefly distinguished from the others, by its leaves, petioles, and flower buds being of a bright purplish red, when they first arise from the root, and some time after, the veins at the back of the leaf, and the scapes, continue their redness, and the leaves are of a very different form from the other species; it also produces the scape between the two leaves, with the bractes enclosing them at the base; the other species bears but one leaf for each flower, both of which are enclosed together by 2 bractes, one of the bractes shorter than the other; the other species have broader and shorter leaves, and are very pale coloured, never the least tint of red in them; they are also much more glaucous, and their lobes altogether different; the flowers, stamens, ovariums, and stigmas, are all very different in each other.

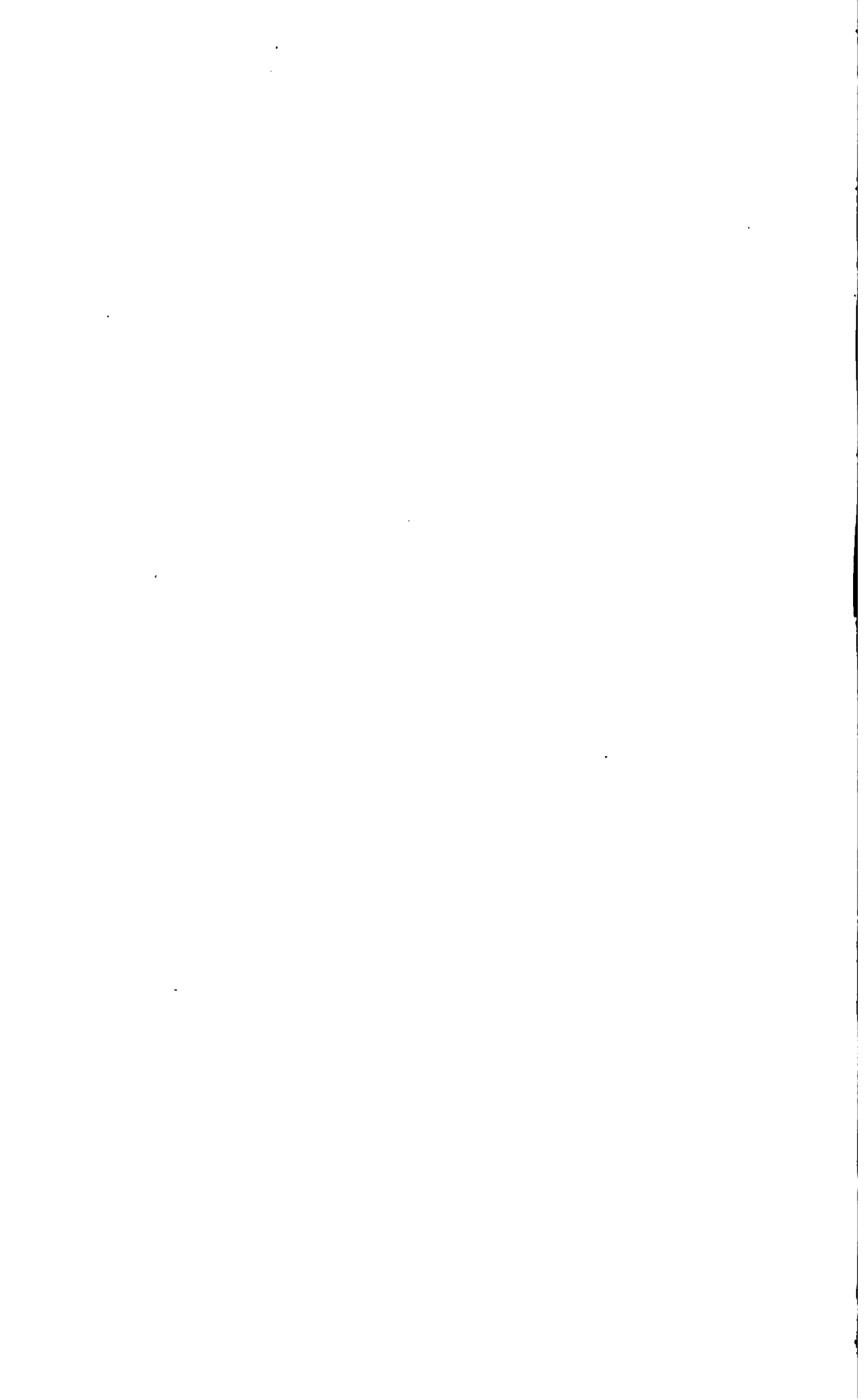
According to Linnæus, the generic name is derived from the Latin, *succus sanguineus*, from the red or orange-coloured juice which proceeds from the root, and the footstalks of the leaves and scapes when broken.

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1. The two deciduous Sepals that form the calyx, and fall off when the flower expands. 2. Stamens showing their different lengths, and the filaments inserted in the base of the anthers. 3. Ovarium somewhat flattened, terminated by a 2-cleft Stigma.







RHODODÉNDRON album.*White Nepal Rhododendron.***Class and Order.** PENT-DECANDRIA MONOGYNIA.**Natural Order.** ERICEÆ. *D. Don prodr. flor. nepal. p. 148.***Subordo III.** RHODORACEÆ. *D. Don loc. cit. p. 152.*

Sect. I. RHODODENDRA. *Corolla* campanulata aut subrotata. *Stamina* 10.—*Frutices v. Arborea*, sempervirentes aut rarissime subdeciduis; ramis glabris v. pulverulento-pubescentibus, raro hirsutis. *Folia* coriacea, oblonga, ovata, v. elliptica, glabra aut subtus subtomentosa. *Flores* corymbosi, speciosi, coccinei, rosei, purpurei, lilacini, albi aut lutei.

RHODODENDRON. *Supra folia 10. series 2. vol. 1.*

R. album, subarborescenti, petiolis rugulosis, foliis rigidis coriaceis: supra rugosis atroviridibus: subtus cinnamomeo-ferrugineus obtusiusculis basi rotundus, umbellis congestis multifloris, bracteis numerosis concavis ovatis v. oblongisve erectis, calycibus brevissime 5-lobus, floribus campanulatus inflatus; intus rugulosus, profunde 5-lobus: lobis undulatis patentibus, filamentis alternis appendiculatis.

Rhododendron album. *Hamilton Mss. in Herb. Lamb. et D. Don prodr. flor. nepal. p. 154.*

A rugged shrub, or small tree, clothed with uneven cracked bark. *Branches* more or less spreading, the terminal shoot generally erect, of a glossy brown colour, before they become too old; when the young shoots first begin to grow in Spring, they are clothed at the base with numerous bracteiform scales; the lower ones smallest, quite rounded and concave, and of a hard rigid substance; those become gradually larger and narrower upwards, but continue rigid and concave a considerable way up; but higher up the stem they begin to become more inclining to membranaceous, with their sides folded inwards, and are more or less lanceolate, bluntish or acute; the upper ones quite membraceous and the longest of the whole, clothed with a short tomentum, as are the young branches at that time, but this wears off as they become older; and they are then clothed with a brownish bark. *Leaves* when in a young state and first unrolling themselves, are rolled back so near the midrib that they hide their under surface; they are then clothed with soft woolly pubescence, as is also the petioles; but this wears off when they become older, the leaves become smooth and the petioles rugged; *old leaves* rigid, of a stiff leathery consistence, blunt at the point, rounded at the base, of a dark blackish green on the upper side, which is deeply channelled down the midrib, as are also the veins which spread from there towards the margin, and with the reticulation of the small veins, it causes a prominent rugulose

appearance: underneath strongly veined, of a cinnamomeous or ferrugineous colour. *Umbel* compact, many-flowered, the flowers in a close head, before the flowers expand, surrounded by bractes of different forms and sizes, those are all erect in our plant, and closely imbricate, not recurved at the points, as in the true *R. arboreum*; lower ones hard and rigid, blunt at the points, ovate and concave, as is also the next set, which terminate in sharp points, upper ones membranaceous and elongated, all deciduous, or falling off soon after the flowers are expanded. *Pedicles* rather more than half an inch in length, clothed with a woolly pubescence. *Calyx* shortly 5-lobed, also pubescent. *Corolla* of a pure white, campanulate, inflated, spotted with numerous spots on the inside, of a beautiful purple, tinged with red: segments 5 and sometimes increased to 6, spreading, sometimes a little crumpled at the margins, 2 upper ones emarginate at the points; lower ones smaller, flat at the points. *Stamens* 10, in the 5-cleft flowers, in the 6-cleft ones 12: *filaments* inserted in the calyx, variable in length, every other one bearing 1 or 2 hooked or straight appendages near the base, the lower ones longest, declining, their points ascending; white, smooth and glossy: *anthers* 2-lobed, bursting at the points for the exclusion of the white pollen, attached by their backs to the filaments. *Ovarium* clothed with white silky wool, 10-celled on the 5-cleft, and 12-celled on the 6-cleft ones. *Style* smooth, white. *Stigma* capitate, pale red, crenulate.

Our drawing of this handsome plant, was taken in April last at the garden of the Apothecaries' Company at Chelsea; it was raised from seed by Mr. Anderson several years ago, but has now flowered for the first time; there are now, May the twentieth, some flowers still remaining on it; Mr. D. Don agrees with us, in considering it a distinct species, as it differs from *R. arboreum* by its rigid coriaceous foliage, and their rugged dark green surface, and bright cinnamon or rusty colour underneath; it also differs essentially, in the bractes that surround the flowers, being straight and erect; not reflexed as in *R. arboreum*; but the most distinguishing character is, its bearing an appendage on every alternate filament a little above the base, sometimes one on each side. This species was first discovered by D. D. Fran. Hamilton, at Narainhetty, on a mountain by itself, on the third of March, 1803, by the mark on the specimens.

As the present plant is said to grow on a cold mountain, it will probably stand well in the open air, particularly if planted on a north border: we have been informed by the Rev. T. Garnier, of Bishop's Stoke, near Winchester, that he has plants of *R. arboreum* in a north border that have succeeded without any covering, and have not been at all injured.

For the derivation of the generic name, see *Supra*, folio 10, series 2, vol. 1.



1. Short 5-lobed Calyx. 2. The 10 Stamens, every other one simple, and the others with one or two appendages a little above the base, the greater part cut off, there not being room for the tops. 3. The woolly 10-angular Ovarium, terminated by the Style and rugulose Stigma.



E.D. Smith del.

Pub. by J. H. Gregory, N.Y. 1891.

RIBES speciosum.

Fuchsia-flowered Gooseberry.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. GROSSULARIÆ. DC. prodr. 3. p. 477.

RIBES. L. *Calyx* 4-5-fidus. *Petala* 4 v. 5. *Stamina* totidem, alterna. *Styli* 2, plids minùsve connati. *Bacca* infera, unilocularis, polysperma. *Semina* arillo succulento obvoluta, funiculis umbilicalibus elongatis superne raphi adnatis placentis 2 parietalibus insertis suspensa. *Embryo* minutus, inversus, in apice albuminis densè carnosì, magni. *Frutices inermes v. aculeati*. *Folia alterna, petiolata, exstipulata, oblata, incisa*. Flores *racemosi v. sub-solitarii, bracteolati; quandoque 4-fidi, 4-andri, rariùs 6-fidi, 6-andri*. *Bacca pulposa, calycis limbo persistenti coronata*. D. Don Mss.

Tribus IV. *Calycibus tubulosis 4-5-fidis, petalis involutis, stylis ferè omninò connatis. Frutices aculeis tripartitis, ramisque setosis, pedunculis paucifloris, floribus speciosis puniceis, baccis hispidis*. Robsonia. Berl.

R. speciosum, ramis setosis, aculeis triplicatis, foliis glabris, calycibus 4-fidis tubulosis, genitalibus longè exsertis, baccis hispidis. D. Don Mss.
Ribes speciosum. Pursh fl. amer. sept. 2. p. 731. in suppl. DC. prodr. 3. p. 478.

R. stamineum. Smith in Rees's cycl. in loco. DC. l. c. 3. p. 477.

R. fuchsoides. Berl. mem. soc. phys. gen. 3. t. 3.

Frutex erectus, ramosissimus, aculeatus, 5-pedalis. Rami virgati, cortice cinereo, setis glandulà depressà capitatà coronatis, inæqualibus copiosissimè vestiti. Aculei (folia mutata) 3, rarò 5, alares, subulati, rectissimi, basi callosà coadunati, statu juvenili cum setis sanguineo-colorati; lateralibus porrecto-divergentibus, semuncialibus; medio paullò longiori. Folia alterna, petiolata, circumscriptione subrotundo-ovalia, 3 v. 5-loba, subseptemnervia, nervis lateralibus 3 basi coadunatis, utrinque gramineo-viridia, concoloria, adprimùm petiolisque parcè glandulosa, sesqui v. bipollicaria; adulta glabra, nitidissima: lobis cuneatis, inciso-serratis; intermedio subtilobato: dentibus obtusis, abruptè mucronulatis; in plantà juvenili folia majora, cordata, v. basi transversà oblata, profundè triloba, magisque incisa, dentibus acutioribus. Petioli filiformes, unciales, suprà canaliculati, basi crassiori. Racemi e basi ramulorum nondùm evolutorum solitarii, pedunculati, penduli, pauciflori. Flores plerumque 3, rariùs 5 v. 7, nunc sub-solitarii, punicanti-coccinei, pulcherrimi, nitidi, omnium maximi, Fuchsiàm quodammodò referentes. Pedunculi filiformes, glandulosi (glandulis innocuis) punicei, unciales v. sesquiunciales. Pedicelli cum ovariis copiosè glandulosi, apice parùm crassiores. Bracteolæ latiusculæ, ovatæ, acuminatæ, concavæ, membranacæ, nervosæ, flori concolores, pedicellis longiores. Calyx 4-fidus, glandulosus, semuncialis: segmentis ligulatis, obtusis, marginibus parùm incurvis, subinde canaliculatis, basi latiori. Petala 4, segmentis calycis duplò breviora, iisdemque alterna, cuneiformia, vix ac ne vix obversè cordata, apice truncata, emarginata, parùm erosa, marginibus involutis: nervis 5, pallidioribus. Stamina 4, basi calycinarum Jaciniarum inserta, longè exserta, calyce plerumque ter longiora: filamenta capillaria, glabra: antheræ basi insertæ, innatæ, biloculares, atrosanguinæ: loculis

parallelis, connatis, turgidis, intus longitudinaliter dehiscentibus. *Pollen* farinaceum, luteum. *Ovarium* depresso-globosum, undique glandulosum, uniloculare: *disco epigyno* carnosum, viridi, nectarifero. *Styli* 2, ferè omninò connati, filiformes, glabri, staminibus parùm præcellentes, apice tantùm soluti. *Stigmata* parva, truncata, pruinosa. *Bacca* (testante amiciss. D. Menzies) magnitudine *Grossulariæ hortensis*, sphærica, atrosanguinea, undique hispide setosa. *D. Don Mss.*

By far the most showy of this group of *Ribes*, having the entire habit of the gooseberry, yet vying in the form and brilliancy of its flowers with the elegant *Fuchsia*. It is one of the many interesting discoveries of our venerable and much valued friend Mr. Menzies, who collected specimens of it in California, during the voyage of Vancouver. The plant had also been gathered about the same time by Sessè and Mocinno, two Spanish Botanists attached to the expedition for exploring the vegetable riches of Mexico. To Mr. Collie, F.L.S. Surgeon to H. M. Ship Blossom, in the late voyage of discovery under Captain F. W. Beechey, we are, however, indebted for its first introduction to the gardens, and from seeds collected by him at Monterey in California, a single plant was raised by Mr. Lambert in 1829. The plant was shortly afterwards placed in the open ground, where it is found to thrive luxuriantly, it being now a large bush, five feet in height. It blossomed for the first time in the beginning of May last, and has continued in flower for more than six weeks. Its profusion of large, crimson, glittering blossoms, contrasted with the bright green, glossy leaves, form one of the most beautiful objects imaginable. The trivial appellation of *speciosum* given to it by Pursh, must supplant, agreeable to the regulations established in botanical nomenclature, the more recent but happier one of *stamineum*, applied to the species by the late Sir J. E. Smith. Another and evidently nearly related species, of which specimens were also collected in the same country by Mr. Menzies, the *Ribes Menziesii* of Pursh, the *ferox* of Smith, has the flowers five cleft and pentandrous, the stamens not exceeding the calyx in length, and the anthers terminated by a short point. In *R. gracile* and *hirtellum* the flowers are occasionally four cleft and tetrandrous, and the stamens in the former project beyond the tubular calyx, and the styles in both are united nearly their whole length; so that I am even sceptical as to the claims of *R. speciosum* and *Menziesii* being regarded as constituting a separate section. The old division of the genus into currants and gooseberries is perhaps, after all, the most natural. The north-west regions of America abound in showy species of this genus, the *R. aureum* and the more recently introduced *R. sanguineum*, the *malvaceum* of Smith, both belonging to the group of currants, being also natives of that country. The albumen is fleshy, not horny, as stated by Jussieu and De Candolle, and the embryo is situated at the apex of the seed close to the chalaza, and is consequently inverted. The situation of the embryo, the presence of umbilical cords, and the fleshy arillus enveloping the seeds, as in *Punica*, are the chief marks which distinguish the *Grossulariæ* from the *Saxifragæ*, to which they approach in the structure of their flower, in their glandular pubescence, and in the insertion of the leaves. *D. Don Mss.*

For the derivation of *Ribes*, see supra fol. 109. series 2.



1. Flower spread open, to show the 4 segments of the calyx in which the 4 stamens are inserted; 2 of them bent round from the base, and passing up through 2 of the petals; the 4 petals alternate with the segments of the calyx, and involute. 2. Ovarium covered with glandular hairs on the outside, terminated with a slender red style, and small slightly forked stigma.



THALICTRUM anemonoides.

Anemone-flowered Meadow-Rue.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *DC. reg. veg. syst. nat.* 1. p. 127.

Tribus II. ANEMONE. Calycis corollæque æstivatio imbricata. Petala 0 aut plana. Carpella 1-sperma indehiscencia in caudas mucronesve sæpius desinentia. Semen pendulum.—Folia radicalia aut alterna.

THALICTRUM. *Calyx* 4-5-sepalus, sepalis ovatis petaloideis aut membranaceis caducissimis. *Stamina* numerosa. *Ovaria* 4-15. *Styli* breves. *Cariopsides* nunc costis elevatis longitudinaliter instructæ, nunc triangulares angulis alatis, nunc inflatæ subvesicariæ. *Embryo* minimus ovatus, cotyledonibus approximatis.—Herbæ perennes. Radices flavescentes, fasciculatæ, fibris nunc cylindricis tenuibus (fibrosæ); nunc crassis obovatis (grumosæ). Caulis annuus erectus sæpius fistulosus. Folia sæpissimè petiolo ramoso ternatim secta, rarissimè indivisa, semper alterna basi dilatata. Flores aut corymbosi, aut paniculati, aut subracemosi, herbacei aut albi aut flavi coloris. Virtues. Herbæ sæpius fœtida, radices amari flavicantes, ad colorem luteum olim tinctoriæ, purgantes (præsertim *T. flavi*) tonicæ et rhabbari subæmulæ. *DC. reg. veg. syst. nat.* 1. p. 168-169.

Sect. IV. GRUMOSA, radicibus grumosis, sepalis petaloideis stamina superantibus.

T. anemonoides, radice grumosa, floribus umbellatis, foliis floralibus petiolatis bitermatim sectis involucrium constituentibus. *DC. reg. veg. syst. nat.* 1. p. 186.

Thalictrum anemonoides. *Mich. flor. bor. amer.* 1. p. 322. *DC. prodr.* 1. p. 15. *Sw. hort. brit. edit.* 2. p. 3.

Anemone thalictroides. *Linn. sp.* 763. *Mill. dict. n.* 8. *Juss. ann. mus.* 3. p. 249. t. 21. f. 2. *Willd. spec.* 2. p. 1284. *Hort. Berol.* 1. t. 44. *Pursh flor. amer. sept.* 2. p. 387.

Habit and frond-like, as in *Isopyrum*, flowers disposed as in *Anemone*, fruit of *Thalictrum*. Roots black and grumose, tubers 2-3 obovate, very blunt, intermixed with the very slender fibres. Stems erect, slender, a span high, simple and naked. Radicle leaves on long footstalks, which are divided into 3 segments at the point; the segments ovate, 3-toothed, cordate at the base. Floral leaves 2, opposite, the petiole nearly 3-parted to the base, the segments ovate, 3-toothed, glaucescent: on footstalks in a sort of whorls, ovate, and 3-toothed, constituting an involucrium. Pedicels 5 to 6, umbelled in var. α., in var. β. one-flowered. Sepals varying in number from 5 to 7, spreading flat, obovate, white,

blunt, longer than the stamens. *Stamens* numerous, variable in length. *Carpells* oblong, not tailed, nerves prominent, striated. *Stigma* a simple little flat head.

Our drawing of those two varieties was made last Spring, from two plants sent us by the kindness of our respected friend, Mr. Leeds, of Manchester, to whom we are much obliged for many presents which he has bestowed upon us, in sending us plants and specimens.

The present species is very distinct from any other of the same genus, and probably should form a new one, but as it is so nearly related to *T. tuberosum*, and *T. petaloideum*, which also bear coloured sepals, it is by those connected to the other species, some others of which have their sepals somewhat petaloid; it is therefore best to keep it in the genus, where it is placed by Michaux and De Candolle, because the seeds agree with that genus; and that is always the most decided character: the radical leaves were produced at the same time as the flowers this Spring, so we were supplied with them, and enabled to publish them, which we could not till now, as they produced no radical leaves last year, nor could we find any in Pursh's Herbarium, or any other that we examined: the single ones were produced from the same plant, as the flowers; but we are obliged to Mr. Low, of Clapton, for those on the double, the slugs in the wet weather having eat all ours up. Mr. Low's plant bore flowers 3 times the size of ours; but that may be accounted for, as his had only 2 or 3 flowers on a scape, and ours has so many, and were not drawn when full grown, but before, as may be seen by their greenness.

The present plants thrive best in a light sandy soil, either peat, or that mixed with sandy loam; in the last the flowers appear to come larger, they require a shady situation: we have read an account of an American collector, who said they grew in sandy woods, all consisted of sand and rotten wood and leaves, and that if you only pulled a single leaf, the whole plant came up. Native of various parts of North America.

The generic name is derived from *θαλλω*, to flourish or abound with, or *εθαλλε*, abundantly produced, and *λικνον* or *λικμος*, the mystic name of Bacchus, a cradle; on this was laid; when born a child, to ensure future affluence; from the amazing quantity of flowers produced by the *Thalictrum's*.



1. Stamen. 2. Carpella seated on the receptacle. 3. A single Carpel.





Trichostema Nutt.

Trichostema Nutt. July 1816.

FRANCOA appendiculata.

*Naked-stalked Francoa.**Linnean Class and Order.* OCTANDRIA MONOGYNIA.*Natural Order.* GALACINÆ. *D. Don in Edinb. phil. journ. Dec. 1828. p. 53.*

FRANCOA. Cav. *Calyx* 4-partitus, regularis. *Petala* 4, æqualia, calycinis segmentis alterna. *Stamina* 16, distincta; *alternis* omninò castratis. *Antheræ* biloculares, longitudinaliter dehiscences. *Ovarium* 4-loculare: *ovulis* erectis, numerosissimis. *Stigmata* 4, dilatata, obtusa, crassa, pruinosa, basi connata, valvulis capsulæ alterna. *Capsula* (è folliculis 4, angulis interioribus connatis petalisque oppositis composita) 4-locularis, apice foraminibus totidem dehiscens, polysperma. *Semina* scobiformia, marginibus valvarum interioribus replicatis inserta: *testâ* *exteriore* membranaceâ, laxâ; *interiore* subcrustaceâ, fuscâ: *albumen* copiosum, carnosum, album. *Embryo* minutus, teres, in basi albuminis erectus. *Radicula* brevissima, obtusa. Herbæ (*Chilenses*) *perennes*: pilis *simplicibus*, *deciduis*. Folia *lyrata*, *ferè* Rapi, *reticulatim venosa*: lobis *rotundatis*, *dentatis*; terminali *maximo*, *cordato*, *obtus*, *sinuato-dentato*: dentibus *glandulâ terminatis*. Flores *terminales*, *copiosè spicatum racemosi*; *quandoque* 5-6-fidi, *staminibus* 20 v. 24, et *stigmatibus* 5 v. 8. *Pedicelli* *uniflori*, *basi bracteolâ lanceolatâ*, *ipsis longiore suffulti*. *D. Don Mus.*

F. appendiculata, acaulis; foliis petiolatis, scapo subsimplici, laciniis calycinis lanceolatis acuminatis, stigmata lobis cuneatis emarginatis.

Francoa appendiculata. Cav. in *anal. de cien. nat.* 4. p. 237. *Icon.* 6. p. 76. t. 596. *D. Don in l. c. p. 52.*

Herba perennis, pilis mollibus, brevibus, simplicibus, copiosè vestita, holosericea. *Radix* fibrosa. *Scapus* è foliorum medio plerumque solitarius, erectus, simplex, v. rarò ramosus, pube copiosâ undique velutinus, solidus, cylindraceus, apicem versus gradatim attenuatus, cubitalis tripedalisve, et ultra, digiti minoris ferè crassitie, quandoque folio uno alterove ornatus. *Folia radicalia* plurima, breviter petiolata, erecto-patentia, lyrata, viridia, *spithamæa*: *segmentis* subrotundo-ovatis, sæpè concavis, inæqualiter dentatis, subserratis, undulatis, reticulato-venosissimis, suprâ rugosis, subtùs leviter varicosis, purpurascentibus; *terminali* maximo, cordato-oblongo, subcucullato, margine sinuato-lobato, ac dentato, sæpè palmari: *dentibus* glandulâ callosâ terminatis; *caulina* (adsint tantùm in scapo ramoso) simplicia, ovato-lanceolata, dentato-serrata, multò minora. *Racemus* spicatus, terminalis, laxis, erectus, *spithamæus*. Flores sparsi, breviter pedicellati, undique versi. *Pedicelli* teretes, 3 lineas longi, densè pubescentes, subtomentosi. *Bracteolæ* ad pedicellorum bases solitariae, quibusque ter longiores, lineari-lanceolatæ, acuminatæ, costâ subtùs proeminulâ carinatæ, villosæ. *Calyx* 4, v. rarò 5-partitus: *segmentis* lanceolatis, acuminatis, trinerviis, pubescentibus. *Petala* 4, rarò 5, segmentis calycinis alterna, iisdemque duplò triplòve longiora, spathulata, mucronulata, æqualia, rosea, disco maculâ oblongâ puniceâ intensiùs colorato, ungue lutescenti, flabellato-nervosa: *nerviis* basi connatis, supernè diffusè pinnatimque ramosissimis, distinctis, nec reticulatis. *Stamina* 16, v. rarò 20 v. 24; *fertilia* 8 v. 10, subæqualia, filamentis setaceis, glabris, calycis longitudine; *alternis* omninò castratis, crassioribus, 4-plò brevioribus, compressis, obtusis, glabris. *Antheræ* biloculares, oblongæ, subtetragonæ, flavæ: *loculis* parallelis, connectivo perangusto, basi solutis, distinctis: *valvulis* suturâ longitudinali depressâ dehiscents. *Ovarium* ovato-oblongum, 4-gonum, 4-loculare, rarò 5-gonum, 5-loculare: *ovulis* in quoque loculo numerosissimis, adscendentibus. *Stylus* nullus. *Stig-*

mata 4, rarò 5, nunc 6 v. 8, loculis ovarii numero æqualibus alterna, adprimùm connata, cuneiformia, plana, truncata, leviter emarginata, crassa, pruinosa, margine revoluta, basi connata. *Capsula* (è folliculis 4 v. 5, angulis interioribus connatis, petalisque oppositis composita,) 4-5-locularis, apice foraminibus totidem dehiscens, polysperma: *valvis* apice prominentibus, crustaceo-membranaceis. *Dissepimenta* è duplici margine valvularum introflexo constituta, crustaceo-membranacea. *Placentæ* duplicatæ, angustè lineares, complanatæ, marginibus interioribus valvularum longitudinaliter adnatæ, nunc demùm solutæ. *Semina* minuta, scobiformia, trigona, gilva; *testâ* *exteriore* membranaceâ, laxâ; *interiore* subcrustaceâ, fuscâ: *albumen* copiosum, album, carnosum. *Embryo* minutus, in basi albuminis erectus. *Radicula* brevissima, obtusa. *D. Don Mss.*

This remarkable and hitherto little known plant is one of the many interesting additions made to our collections by Mr. Anderson, the assiduous Botanist who accompanied our much esteemed friend Captain King in his recent voyage of survey on the coasts of South America. It was raised at the Clapton Nursery, from seeds collected by Mr. Anderson near the port of San Carlos de Chiloe, where the plant had been originally discovered by Don Luis Née, Naturalist to the Spanish expedition under the ill-fated Malaspina, and from whose Herbarium the materials were derived on which Cavanilles founded the genus. Two other species, namely *Francoa sonchifolia* and *ramosa*, described by me in the work above referred to, have also been recently introduced from seeds collected by Mr. Hugh Cuming, in Chile. The former is very nearly related to the present species, but the elongated caudex, and the rounded lobes of the stigma, appear sufficient to distinguish it. The plant appears to succeed well in the open border, where its tall clusters of rosy blossoms, marked with deep crimson, render it a conspicuous object. The *Galacinae*, at present consisting of *Galax*, *Francoa*, and *Tetilla*, form a small family intimately related to the *Saxifrageæ*, and peculiar to America. The curious genus *Tetilla* has all the air of a *Saxifraga*, and agrees with several species of that genus in the remarkable inequality of its petals. M. De Candolle, who has referred this genus to the *Saxifrageæ*, has overlooked the sterile stamens which are also present in it, and alternate with the fertile ones, as in *Francoa*, which the same distinguished Botanist has included among the *Crassulaceæ*. It is chiefly distinguished from *Francoa* by its irregular calyx, and by the inequality of its petals. The stigmata are two, and slightly cloven, but confluent at the base into a short style, and the ovarium (although I have only had an imperfectly developed specimen to examine) appears to consist of four cells, so that in the structure of these organs the genus does not materially differ from *Francoa*, which M. Adrian de Jussieu, who was the first to point out the real affinities of *Tetilla*, is disposed to regard as the type of a family distinct from *Galax*; but not having seen the paper of that acute and learned Botanist on the subject, I am ignorant of the reasons which have led him to this conclusion. In consequence of the specimens which I had to examine being very incomplete, several errors have unavoidably crept into my former description of the genus, which are now corrected. The genus was named by Cavanilles after Don Francisco Franco, a Physician of Valentia, who flourished at the commencement of the sixteenth century. He was author of several medical works, and an ardent cultivator and promoter of the science of Botany. The *Francoa sonchifolia* is the second species of Molina's genus *Panke*, the other being *Gunnera scabra*, from which his generic character has been principally derived. Every Botanist must rejoice at having the science rid of such unnatural associations. In the unexpanded flower of *Francoa*, the lobes of the stigma are connate, and in that state this organ resembles very much the stigma of *Galax*. *D. Don Mss.*



1. The deeply 4-cleft calyx, with its segments prominently 3-nerved. 2. Petal detached. 3. The 8 Stamens, every other one opposite to the petals, and the 4 alternate ones passing between them, and laying free on the calyx; 8 scales placed between the Stamens, which are sterile stamens. 4. The 4 Styles free, but united at the top by a 4-lobed Stigma.



IRIS biflora.*Two-flowered Iris.**Linnean Class and Order.* TRIANDRIA MONOGYNIA.*Natural Order.* IRIDEÆ. *Brown prodr.* 1. p. 302.*IRIS.* Supra fol. 11 et 56. series 11.

I. biflora, scapo leviter pruinoso 2-3-floro spathaceo-foliaceo foliis longiore : foliis radicalibus ensiformibus falcatis acutis striatis glaucis, segmentis perianthii oblongo-ovatis integris undulatis basi attenuatis violaceo-purpurascentibus: interioribus inflexis: exterioribus reflexis: tubo ovarii duplo longiore.

Iris biflora. *Linn. syst. veg.* 90. *Solander. hort. Kew. ed.* 1. vol. 1. p. 70. *Willd. spec. plant.* 1. p. 227. (*exl. Pallit. et omnia synonyma Ker!*) *Vahlenum.* 2. p. 132. *Pers. syn.* 1. p. 51. *Thunb. diss. Ir. n.* 6. *Rœm. et Schult. syst.* 1. p. 462. *Ker irid. gener.* p. 57. (*exclus. syn. I. subbiflora Ker!*)

Iris bohémica. *Schmidt. flor. bohém. n.* 303. *Pohl flor. bohém.* 1. p. 47. *Schult. ostr. flor. edit. 2. I.* p. 104. *Rœm. et Schult. syst. veg.* 1. p. 465. *Spreng. syst.* 1. p. 162!

Chamæiris latifolia biflora. *Besl. hort. cyst. vern. ord.* 8. f. 1.

Chamæiris major saturatæ purpurea biflora. *Bauh. pinax.* 33.

• *Root* perennial, tuberous, spreading considerably and branching. *Leaves* generally 5 on the leaf-shoots in the flowering season, all more or less falcate, some of them very much so, the longest 10 inches and a half in length, though they do not appear to be much above half that length, being so very falcate: the broadest about an inch in breadth, gradually becoming smaller downwards, glaucous and very strongly striated. *Scape* 2-or-3-flowered, clothed with short spathaceous leaves, which scarcely reach from one joint to the next, terminal flowers sometimes 2 from the same scape, but more generally one, also 1 from the bottom, and 1 from the side. *Spathe* 2-glumed, clasping each other, and the peduncle, ovary, and a good part of the tube, inflated about the middle, acute, the inner one longest, green, more or less marked with violet, particularly near the point. *Flower* of a purple violet. *Peduncle* longer than the ovary, nearly but not quite cylindrical. *Ovary* very short, about half the length of the tube, 6-lined, at first cylindrical, but soon becoming 3-sided. *Tube* of the *perianthium* green tinged with blue upwards, obtusely angular: 3 outer segments ovately obovate, rounded at the points, undulate, tapering to the base, but not so much so as the inner ones, from the base to the bend, and a little above, striped with white: from the base to the middle, clothed with a close line of white hairs, tipped with violet, and towards the end nearly altogether violet: 3 inner segments erect or bent a little inwards at

the top, considerably broader than the outer ones, much more undulate and crumpled, all notched at the point, ovately oval, very much attenuated at the base, the margins curved inwards, of a pale brown, striped with a darker brown. *Stamens* 3, *filaments* inserted in the mouth of the tube, flat and tapering upwards, white at the base, but becoming blue all the way up: *anthers* linear, 2-lobed, close-pressed to the back of the stigma, their fronts forward. *Style* short, triangular. *Stigma* deeply 3-parted, the segments petaliform, rather larger than usual, elliptic, keeled on the upper side and hollow below, points split down to the membrane, and lacerate at the points.

We first determined this plant to be the *I. bohémica* of Roemer and Schulte's Syst. Veg. v. 1. p. 465, and of all the other authors above cited; by an observation there it was said that Marshall Bieberstein had given it as *I. biflora*; this observation induced me to go to Mr. Lambert's, and to compare it with Vahl's long description, with which it agreed in every point: I then went to the Linnean Society with Mr. D. Don, and we examined a good specimen of it in the Linnean Herbarium, which was so much like our drawing, that it appeared as if taken from that plant; the specimens that flowered at Mr. Anderson's this Spring were some 2-flowered, and others 3-flowered, some with the upper spathe bearing two flowers on the top, and one by the side, or at the lower part of the scape, the most general way they flowered, was one at the top, one at the side, and one at the lower part of the scape, as in our figure, and also in the Linnean Herbarium, one scape flowered in Mr. Anderson's garden at Chelsea, with one flower on the top, and two at the base, we had two plants flowered in our Garden precisely like the figure.

Vahl's specific description is better than that of Linnæus; he describes the plant 2-3-flowered; and Linnæus 3-flowered; Linnæus's name was most likely derived from the 2 upper flowers, from the same spathe, that being very frequent.

We believe no author has ever known the Linnæan *I. biflorus*, since Vahl, till now; Sir J. E. Smith must have known it, but probably never saw it alive; Mr. Ker has confused it with 2 or 3 others, and in his last edition of "Iridearum Enumeratio" he has given it as *I. subbiflora*! a species to which it is not in the least related: we are therefore now much pleased to clear up all the mistakes for our readers.

Our drawing was taken from the Apothecaries' Garden at Chelsea, in May last; it continues producing a quantity of flower scapes, from the beginning of April till the middle of May. Mr. Anderson found out that he had first introduced it in the year 1826 under the name of *I. bifrons*. We have also made out the *I. biglumis* this Spring by the description of Vahl and Pallas's figure: it also flowered at Mr. Anderson's, but the snails destroyed every flower of it, except the first, so that we could not procure a perfect figure this season. The present species is a native of Portugal, certain; it also appears to be from Bohemia, and a Province of Russia.

Several other fine species we have found out, by comparing them with different figures and descriptions, many of which have been confused with others, but we have no more room at present, but will say more under the next species we publish. In the next we publish we will give Mr. Ker's generic description.

For the derivation of the Generic name, see folio 11. of this series.



1. The base of the Perianthium spread open, to see the insertion of the three Stamens.
2. Style terminated by the 3 spreading Stigmas, 2 cut off near the base, the other perfect.



TULIPA maleolens.

Unpleasant-scented Tulip.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. TULIPACEÆ. *Kth. synops.* 1. p. 292.

TULIPA. Supra folio 97, series II. vol. I.

Sect. I. Bulbis subsolitariis sæpissimè divisis aut cumuloso-congestis: non repentibus: fibris filiformibus, densè congestis. Floribus solitariis sæpè colore variegatis. Perianthii segmentis acuminatis obtusisve, latis aut angustis, apice et basi plus minusve pilosis v. tomentosis, aut nudis.

To this section belongs the *T. Oculus Solis*, *T. Bonorotiana*, *T. præcox*, *T. pubescens*, *T. Gesneriana*, which have been published before in our former numbers.—*T. turcica* belongs to the second section, with creeping roots, and is frequently confounded by foreign Botanists with *T. cornuta*; but the *T. turcica* of Roth is the Florentine Tulip, which, he observes, differs from *T. sylvestris* only in size.

T. maleolens, scapo foliis breviorè glabro, foliis oblongo-lanceolatis basi et apice attenuatis subundulatis glaucis marginibus ciliatis suprà canaliculatis subtùs subcarinatis, perianthii foliolis exterioribus longioribus ovatis v. ovato-oblongis acuminatis: interioribus elliptico-obovatis obtusis, maculâ baseos latè rhomboideâ emarginatâ.

Tulipa maleolens. Bertol. in litt. ad Schultes. Reboul. Nonn. sp. Tul. not. p. 9. in App. Schult. syst. par. 1. p. 376. 1829.

β. variegata, floribus rubro-purpureis flavis stramineis cupreis et pallide glaucis intermixtis.

Bulb pure white, sometimes partly covered with a glossy brown deciduous shell. *Leaves* clasping the scape, oblongly lanceolate, attenuated to the base and point, somewhat undulate, glaucescent, and ciliated on the margins: channelled on the upper side; and somewhat keeled on the lower. *Scape* slender, frequently 3-leaved, smooth and glossy, the points of the leaves frequently extending above the scape. *Perianthium* petaloid; three outer leaflets longest, ovate, or oblongly ovate, taper-pointed, of a pale brownish red colour on the outside, and slightly glaucous, edged with a pale orange or copper colour, inner side of a pale yellow, inclining to copper, marked at the base with a large rhomboid spot, of a pale green, emarginate on each side, and yellow at the base: three inner leaflets elliptically obovate, rounded at the points, and obtuse: channelled up the back,

and keeled on the upper side, both sides of a brilliant purple crimson colour, shaded with copper colour at the margins and ends, particularly so after having been three or four days in flower. *Stamens* 6: *filaments* broad at the base, tapering to the anthers, inserted at the base to a commissure between the ovarium and leaflets of the perianthium: *anthers* linearly oblong, inserted by their base into the very slender point of the filament, which causes them to be versatile, extending a little above the stigma: *pollen* dark purple. *Ovarium* 3-sided, at first pure white, changing to a pale straw colour. *Stigma* 3-lobed; lobes reflexed, channelled on the upper side, and pustulose.

The variety β . *variegata* differs chiefly from the species, in being of a more brilliant colour, and variegated with bright yellow, orange, rose-colour, or bluish glaucescent at the back. The flowers occur more or less variegated.

The species blossoms about the 14th of May, and continues to the end of the month. Our drawing was taken at the Botanical Garden, Chelsea, in May last. It requires the same treatment as other Tulips.

The generic name is already explained at folio 97, of the present series.



1. Stamen, showing the insertion of the anther, and the pollen on the anther. 2. Ovarium terminated by a 3-lobed stigma, which is fringed. 3. Root. 4. Outline of a leaf.



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RHODODÉNDRON *indicum*. var *Smithii*.

Smith's hybrid Indian Rhododendron.

Class and Order. PENT-DECANDRIA MONOGYNIA.

Natural Order. ERICEÆ. *D. Don prodr. flor. nepal.* p. 148.

Subordo III. RHODORACEÆ. *D. Don loc. cit.* p. 152.

RHODODENDRON. Supra folio 10. series II.

Sect. III. TSUTSUSI. *Calyx* 5-partitus: segmentis longis patentibus v. erectis acutis. *Corolla* tubulosa, rotata, 5-partita: segmentis patentibus. *Stamina* 5-8 v. 10: *filamenta* inæqualia, inferne pilosa, erecta aut apice adscendentia.—*Frutices* erecti aut patentes, ramosi, sempervirentes aut subdecidui: *ramis* virgatis, junioribus pilosis. *Folia* hirsuto-strigosa. *Flores* terminales, solitarii aut gemini.

R. indicum, floribus terminalibus subbinis, ramis strigosis erecto-patentibus gracilibus ad anthesin pendulis, foliis elliptico-lanceolatis basi et apice attenuatis strigosis, dentibus calycinis elongato-lanceolatis ciliatis patentibus.

Rhododendron indicum. *Swt. hort. brit. edit. 2.* p. 343. n. 29. *Brit. flor. gar. ser. II.* t. 128.

Azalea indica. *Linn. sp. pl.* p. 214. *Willd. spec. plant. 1.* p. 831. *Botan. magaz. t.* 1480.

For the other synonyms, see fol. 128 of the second series.

γ. *Smithii*, Flowers of a rosy-salmon-colour, large and spreading, expansion 2 inches and a half to 3 inches: spots darker: tube half an inch in length: stamens 8, scarcely bent upwards at the point: style much longer than the stamens: leaves dark green.

Stems erect: *branches* spreading, slender, strigose, thickly clothed with rigid brown hairs, which lay prostrate on the stem; pendulous, when in flower, from their weight. *Leaves* on short footstalks, that are flattened on the upper side: *lower ones* ovate, tapering to both ends: *upper ones* elliptically lanceolate, acute; all clothed on both sides with decumbent hairs, particularly on the nerves and margins, many of these wear off when they become older: *young leaves* and stems densely clothed with white silky hairs. *Flowers* in pairs, terminating the branches, pale rose or salmon colour, clothed with long soft hairs. *Peduncles* scarcely half an inch in length, also clothed with closely pressed chaffy hairs. *Scales* at the base of the peduncles linear, thickly clothed on both sides with bright brown hairs. *Calyx* deeply 5-cleft,

the segments broadest, and purple at the base, narrowly lanceolate, tapering to the point, spreading when the flower is expanded, covered with close-pressed hairs, and fringed with longer spreading ones. *Corolla* very large and spreading: tube half an inch, bluntly keeled at the back, and with four other keels, that are considerably smaller: expansion of the limb two inches and a half to three inches, deeply cloven into five parts: segments nearly of a size, broadly ovate or nearly oval, rounded at the end; the upper one, and the inner sides of the two next to it, spotted from near the base, to about half way up, with a sort of warted spots of a darker colour. *Stamens* 7 or 8, of different lengths, of a bright red: *filaments* clothed with short stiff hairs about half way up: *anthers* 2-lobed, attached by their back to the filaments. *Ovarium* covered with long white close-pressed hairs. *Cap-
sule* 5-celled, 5-valved. *Placenta* single, with five angles. *Seeds* compressed, and winged. *Style* smooth, bright red, considerably longer than the filaments. *Stigma* a pustulose head.

This splendid hybrid production is the offspring of *Rhododendron phœniceum*, that had been fertilized by *R. indicum*, and was raised by Mr. Smith, at Coombe Wood, in the Spring of 1828. It partakes of the characters of both parents, and like them is rather tender, but appears to be a more desirable plant than either; is of free growth, and produces its flowers in great abundance. Mr. Smith's success in this department of Horticulture is well known, his collection surpassing any thing of the kind we have seen.

For the explanation of the generic name, see folio 117, of the present series.



1. The Pedicle, to show that the upper part is purple, and every part very hairy, as well as the calyx. 2. Calyx purple at the base and green at the points, attenuated to a long point at the end, where it ends very sharp. 3. Filament, to show its hairiness, and the anther attached to its back. 4. Ovarium woolly. 5. Style smooth, and bent upwards. Stigma capitate.



CALCEOLARIA pëndula.

Large-Flowered Slipper-wort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr. v. 1. p. 433.*

Sect. II. STAMINA 2 ANTHERIFERA.

CALCEOLARIA. Supra folio 130, series II.

C. pëndula, herbacea; foliis latis oblongo-obovatis ovatisve inæqualiter serrato-dentatis suprâ pilosis inferioribus petiolatis: superioribus sessilibus acutiusculis, segmentis calycinis lato-ovatis quinquenerviis, corollæ labio inferiore maculato 5-crenato pendulo maximo.

Stem about 18 inches in height, of a purple colour at the base, and some way up the stem, the green beginning just above the fork of the branches, thickly clothed with spreading woolly hairs, that are very unequal in length, as are also those on the small branches, peduncles, and segments of the calyx. *Leaves* from the root, and a little way up the stem, petiolate, very broad and obovate; *petioles* winged on each side. *Corymbs* forked and paniced. *Peduncles* slender, pendulous from the weight of the flower, joined to the peltate calyx. *Calyx* 4-cleft, segments broadly ovate, scarcely acute, 5-nerved, spreading, or a little reflexed when in flower. *Corolla* 2-lipped; *upper lip* very small, hairy, rounded at the back, tapering up to a small round mouth, bearded in the throat with long white hairs, and marked downwards with reddish purple spots; *lower lip* very large, and inflated at the back; the lappet or cover that stops up the hole of the tube, is elegantly marked with purple lines. *Stamens* 2; *filaments* inserted in the base of the upper lip; short, thick, and fleshy, tapering to the point that is inserted into the base of the anthers: *anthers* two-lobed; *lobes* egg-shaped, white, oval, furrowed on the outside, and each bending downwards towards each other. *Ovarium* thickly clothed with hispid hairs, 2-valved, 2-celled.

This species of *Calceolaria* is a native of Chiloe, and differs from *C. crenatiflora*, by its large pendulous lower lip, and its 5-crenated crown, which in *C. crenatiflora* is suberect or

ascending, with the crown only 3-lobed. The present is by far the finest of the two.

Mr. Low has raised, I believe, but one plant of this species, which it is hoped will produce seeds. Its large flowers hanging down in a graceful manner, render it one of the most showy of the tribe.

Like the rest of its genus, this species will most likely succeed in a warm border, with a pot placed over it in severe weather. The plant was introduced by Mr. Anderson, the able Collector who was with Captain King in his voyage to Chiloe, and the Straits of Magellan.

For the explanation of the generic name, see folio 130, series 2.

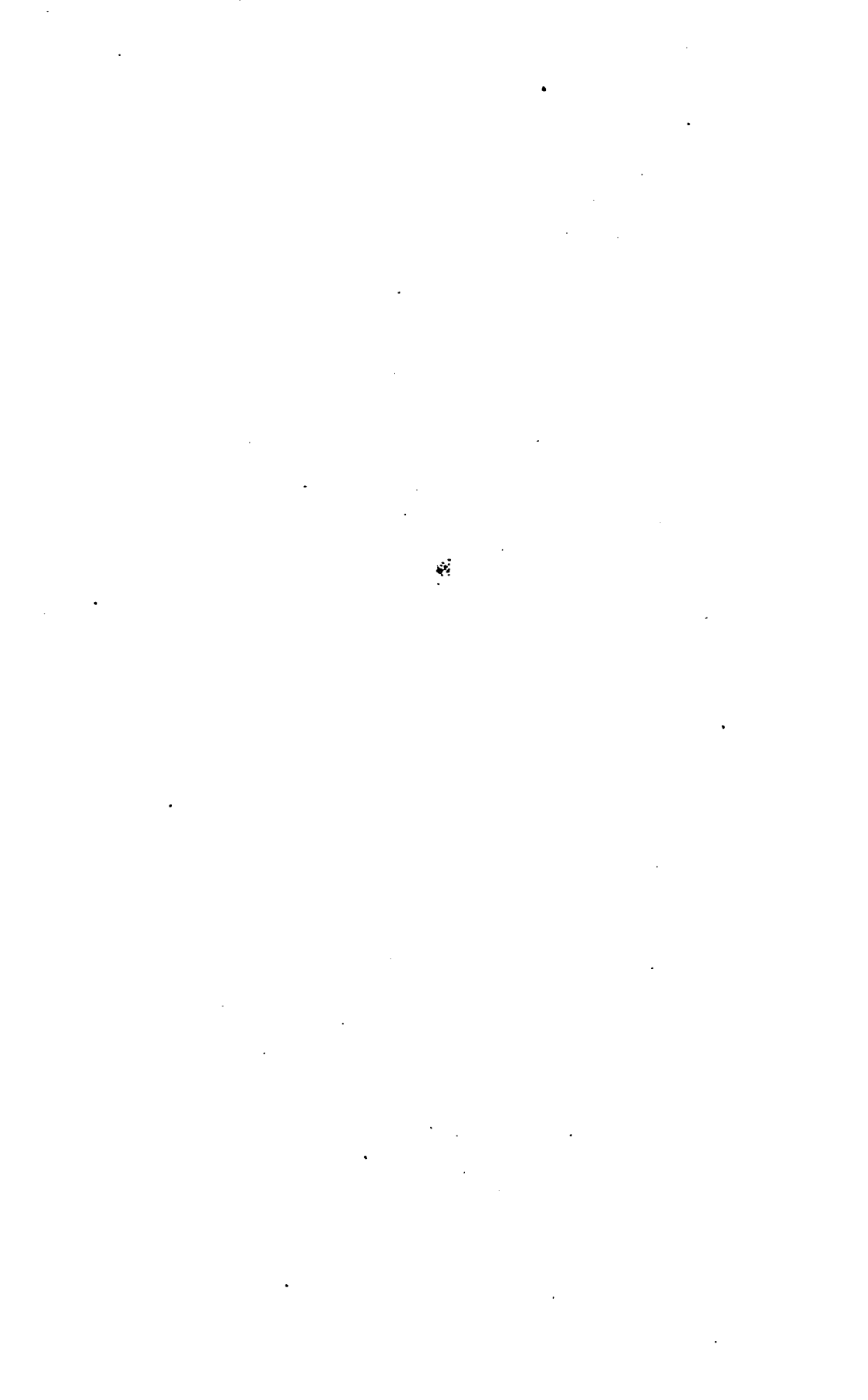


1. The 4-lobed Calyx spread open, the lower one smallest, showing the Ovarium.
2. The upper lip of the Corolla spread open, to show the two lobes of each anther, which are peltate and egg-shaped.
3. Ovarium, terminated by a short Style, and very small capitate Stigma.
4. The outline of a root leaf.

Note on Francoa Appendiculata, supra folio 151.

Since the publication of my description of the above-mentioned plant, I have had my attention directed to the interesting memoir of M. Adrian de Jussieu, in the *Annales des Sciences Naturelles*, for January, of the present year. I see no reason, however, to alter my opinion with respect to the affinity of *Francoa* and *Galax*, which last, M. Adrian de Jussieu considers to belong to the *Ericææ*; but which, in my opinion, differs essentially from that family in several important particulars, especially in the structure of its capsule. As to the comparative length of the embryo in *Francoa* and *Galax*, I scarcely think much value can be attached to it, when the smallness of the seeds is taken into consideration. I beg to make the following additions to the description.

Stigmata subbiloba, e placentis 2 loculorum collateralium, nec singulorum, ortum ducentia, et subinde cum oculis capsulæ alternantia. *Ovula* processibus succulentis paululùm elevatis inserta, duplici ordine disposita, subhorizontalia, vix adscendentia. *Albumen* copiosum, cartilagineum. *Embryo* nec in basi, sed in apice albuminis locatus, ut rectiùs descripait cl. Ad. de Jussieu. *D. Don Mss.*





TACSONIA pinnatistipula.

Pinnated Stipuled Tacsonia.

Class and Order. MONADELPHIA PENTANDRIA.

Natural Order. PASSIFLOREÆ. DC. *prodr. pars.* 3. p. 321.

Tribus II. PASSIFLOREÆ VERÆ. Petala nulla. Stamina (in unicâ 5.) Ovarium pedicellatum. Pedicelli sæpiùs nonnulli cirrhosi. Caules sæpiùs scandentes.

TACSONIA. *Involucrum* triphyllum aut tripartitum. *Perianthium* coloratum: tubo longissimo cylindræco: limbo decempartito, patente: laciniis quinque interioribus minoribus petaloideis. *Corona* duplex; altera: margo annuliformis, glandulosus, crenatus, summum tubum coronans; altera: membrana tenuis, integra, tubo supra basim adnata, columnam staminiferam cingens. *Stamina* 5, longissima, cum stipite ovarii connata, apice libera, divergentia. *Anthera* versatiles. Pistillum et Fructus Passifloræ.—*Frutices scandentes cirrosi, facie* Passifloræ; *Pedunculis axillaribus, unifloris, solitariis aut geminis*; *Floribus longissimis, sæpiùs roseis, basi cinctis involucri calyciformi, e bracteis tribus connatis aut distinctis.* Kunth p. 439-440. *char. parùm mut.*

Sect. I. EUTACSONIA. *Involucrum* magnum, triphyllum, bracteis nunc liberis, nunc inter se coalitis.—** Foliis trilobatis.

T. pinnatistipula, ramis densè tomentosis tetragonis, foliis tripartitis subtùs tomentosis penninerviis suprà glabris nitidis parcè hirsutis: lobis elliptico-lanceolatis aut lanceolato-elongatis rugosiusculis mucronatis incurvo-serratis, petiolis 4-8-glandulosis, stipulis minimis pinnatis, cirrhis tomentosis, coronâ filamentosâ limbo dimidio subæquali.

Tacsonia pinnatistipula. Juss. *ann. mus.* 6. p. 393. DC. *prodr. par. III.* p. 334. *Sot. hort. brit. ed.* 2. p. 218.

Passiflora pinnatistipula. Cavan. *icon.* 5. p. 16. t. 428. *Pers. syn.* 2. p. 221. *Spreng. syst.* 3. p. 39.

Stem extending to a great length: *branches* quadrangular, densely covered with wool, as are likewise the petioles or leaf-stalks, the stipules, the flower-stalks, and the bractes. *Leaves* on the old branches 5 inches in breadth, and 4 in length, varying to 3 inches in length, and $\frac{1}{4}$ of an inch in breadth, on the flowering stems, but seldom exceeding 2 and a half in breadth, smooth and glossy on the upper side; the under side clothed with dense wool, as has been already observed, but bearing a few straight hairs intermixed. The old leaves are very rugged and uneven, the younger ones much less so; but they have all more or less a sort of rugged appearance. *Leaf-stalks* or *petioles* on the flowering branches about three fourths of an inch in length, each bearing from 4 to 8 glands. *Stipules* small, deeply pinnatifid. *Tendrils* about 6 inches long. *Peduncles*,

or flower-stalks, about 3 inches in length, more or less twisting. *Bractes* 3, about a line below the tube of the flower, ovate, acute, sharply serrate, of a dark brown colour, rather more than half an inch in length. *Tube of the perianthium* 2 to 3 inches long, of a thick and fleshy texture, woolly without; white within, and much swollen at the base, and hollow on the inside, and from the top of which issues a white membrane, about 3 lines in breadth; this covers 5 holes, whence arise 5 swellings on the outside. *Limb* deeply parted into 10 segments, disposed in a double series: the *outer segments* pale green, somewhat coriaceous, tomentose, carinate, and furnished a little below the apex with an awl-shaped point: the *inner ones* thinner, rather shorter, pointless, and of a rose colour. *Filamentary processes* of a dark blue, spreading radiately, glossy, not half so long as the segments, some inserted in the front of the inner segments, and some between the two. *Torus* 3 inches in length, inserted in the base of the calyx. *Stamens* 5, monadelphous, or all joined together in a long cylindrical tube, attached to the torus, from its top to the bottom; from the top is produced 5 thin flattened incurved filaments; at the end of each of those is a minute very slender point, which is inserted in the anther above the middle of the back; they are then versatile. *Anthers* bursting longitudinally, and laying flatly open for the exclusion of the pollen. *Ovary* egg-shaped, densely covered with short wool. *Styles* 3, 5 lines in length, attached to the back of the stigmas a little above the base, which causes them to bend downwards, so as to be nearer the pollen, smooth. *Stigmas* very large and fleshy, flatly rounded in front, 2-lobed at the apex at the back.

For the opportunity of giving a figure of this elegant Passion-flower, we are indebted to Mrs. Marryat, in whose choice collection, at Wimbledon, the plant has blossomed for two years successively. This year it has nearly filled the Conservatory. Its showy blossoms, which it produces in abundance, claim for it a place in every collection. It is a native of Talcahuano, and Valparaiso, in Chile; and we are inclined to think, that, in favourable situations, it will prove quite as hardy as the *Passiflora cærulea*. The genus is principally distinguished by the long tube of the Perianthium. The name is of Peruvian origin, *Tacro*, being applied to several species of this genus in Peru, and was first employed by Jussieu, to denote this group.



1. Tube of the perianth split open, to show the hollow pits at the base. 2. Section of the limb, showing the disposition of the filamentary processes.



2

T. G. Smith, 1891.

Pub. by J. E. Smith, 1891.

CLARKIA pulchella.

*Pretty Clarkia.**Natural Order.* ONAGRARIÆ. *DC. prodr.* 3. p. 35.

Tribus III. ONAGRÆE. Fructus capsularis, loculis polyspermis, seminibus non alatis. Calycis tubus ultra ovarium productus. Stamina petalorum numero dupla.—*Herbæ interdum basi suffruticulosæ.*

CLARKIA. *Calyx* tubulosus, 4-fidus, omnino *Ænotheræ*. *Petala* 4-unguiculata. *Stamina* 8; alterna 4, castrata. *Stigma* 4-partitum: lobis subrotundis, petaloideis. *Capsula* 4-locularis.—*Herbæ annuæ pulcherrimæ. Foliis alternis, integerrimis. Floribus axillaribus, sessilibus, solitariis, ænand purpureis, v. albis.*

Clarkia pulchella. *Pursh flor. amer. sept.* 1. p. 280. t. 11. *Nutt. gen. amer.* 1. p. 249. *Lindl. bot. reg.* 1100. *DC. prodr.* 3. p. 52. *β. flore albo.*

Annual, erect, from a foot to eighteen inches in height, branching. *Stem* round, or a little flattened in the young branches, thickly clothed with short pubescence. *Leaves* alternate, nearly sessile, tapering to both ends, entire, clothed on both sides with short pubescence: lower ones lanceolate; upper ones linear. *Petioles* very short, pubescent. *Flowers* axillary, solitary, nearly sessile, varying from a light lilac, to a bright reddish purple. *Ovary* below the calyx, seated on a short peduncle, slightly 8-furrowed, densely clothed with a hoary pubescence. *Calyx* similar to *Ænothera*, tubular, 4-cleft, pubescent, more or less tinged with purple, generally split on one side for the expansion of the corolla: segments lanceolate or linear, more or less connected. *Petals* 4, crossing each other, deeply 3-lobed, with a long slender unguis, which is toothed on each side: lobes divaricately spreading; the terminal one obovate, oblong, obtuse, crenulate at the point: side ones ligulate, also crenulate. *Stamens* 8, four fertile and four sterile, the fertile ones alternate with the petals, the sterile ones opposite to them, and scarcely half the length of the fertile ones: *filaments* smooth, purple:

anthers linear, two-celled: *pollen* white. *Style* filiform, erect, smooth, shorter than the petals. *Stigma* 4-parted, the segments spreading, flat, and rounded, white.

Undoubtedly one of the most showy among the many interesting additions made to our list of hardy annuals by Mr. David Douglas, in the course of his travels in the north-west regions of America; and, according to whom, the plant is met with abundantly in the countries near the Columbia. It was first discovered on the banks of the Kooskoosky and Clarke Rivers, by Captains Lewis and Clarke, well-known by their travels across the North-American Continent to the Pacific Ocean; and after the last mentioned of those Gentlemen the genus was named by Pursh, who has given a tolerable figure and description of it in his *Flora* of North America. Mr. Douglas has added two others to the genus, but both of them inferior to the present in beauty. The circumstance of the four alternate stamens being sterile, distinguishes the genus from *Oenothera*, with which, in other respects, it agrees. The stigma varies much in form in different species of *Oenothera*. The plant is quite hardy, succeeds well in almost any soil, and produces its seeds in great abundance. The flowers are found of various shades of purple in the cultivated plant; but the white variety, represented in our plate, is more particularly deserving of notice.

Our drawing was taken at the Nursery of Messrs. Allan and Rogers, at Battersea.



1. Calyx. 2. Stamens, with part of the petals. 3. Pistil.



R. H. 1000

R. H. 1000

ROSA indica var. *Smithii*.

Smith's Yellow Noisette Rose.

Linnean Class and Order. ICOSANDRIA POLYGYNIA.

Natural Order. ROSACEÆ. *Juss. gen.* p. 334.

ROSA. Calycis 5-fidi, tubo urceolato, carnosio. Petala 5. Stamina multiplici ordine copiosissima. Ovaria indefinita, parietibus tubi calycini undique inserta. Stylis totidem, exserti, unilaterales. Achenia exsucca, crustacea.

Frutices (hemisph. boreal. regionibus temperatis propria!) plerumque aculeati. Folia raro simplicia. Flores speciosi, delectissimi. D. Don Mass.

1. *R. indica*, foliolis ellipticis acuminatis glabris crenato-serratis subtus glaucis, ovariis 40-50. *Lindl. Monog.* p. 106.

Rosa indica. *Linn. sp. pl.* p. 705. *Lawr. ros. t.* 26. *Willd. sp. pl.* 2. p. 1079. *Ait. hort. kew. ed. 2.* p. 266. *Redout. ros. 1. t.* 14. et 2. t. 15. *DC. prodr.* 2. p. 600.

Var. *Smithii*, floribus copiosis corymbosis plenis pallide sulphureis fragrantissimis.

An upright, much branched shrub, from four to six feet high, sparingly armed with scattered, compressed, hooked prickles. *Branches* smooth, tinged with purple. *Leaves* composed of from five to seven, and the upper ones rarely of more than three leaflets, which are ovate, pointed, rather coriaceous, rounded at the base, regularly serrated, with short, incurved, somewhat adpressed, pointed, equal teeth, slightly revolute at the margin; smooth on both surfaces; the *upper* of rather a deep green; the *under* paler; slightly glaucous, and beautifully veined. *Foot-stalks* and *rachis* narrow, channelled, sparingly glandular, otherwise quite smooth, and occasionally furnished with a few hooked prickles. *Stipules* narrow, pointed, and fringed with glands. *Flowers* about the size of the double-yellow China Rose, but of a deeper yellow, and like the Noisette Rose, in clustered corymbs of from ten to twenty-two, and highly fragrant. *Calyx tube* tribinate, glandular: *segments* broadly ovate, with a long,

attenuated, toothed point, glandular, particularly at the edges, the inner surface downy, mostly simple, but occasionally furnished with one or two pair of pinnæ.

A hybrid production, from the Noisette Rose, fertilized by the pollen of the yellow China Rose, raised by Mr. W. Smith, of Coombe Wood, to whom we are indebted for the specimen whence our drawing was taken. It resembles the former in many respects, but is of much more vigorous growth, and the flowers much more copious, of a deeper yellow, and disposed, like the Noisette Rose, in corymbs. They are highly fragrant. This Rose is perfectly hardy, is readily increased by cuttings, and may be regarded as a most valuable addition to our already numerous list of China Roses.

The rose is the emblem of youth and beauty; in Latin, *Rosa*; in Greek, ῥόδον; and in Celtic, rhodd, or rhudd, all signifying red, or referring to the prevailing colour in this genus.





J. B. Smith del.

Pub. by W. B. Rogers, Inc. N.Y.

W. B. Rogers, Inc.

ALSTROEMERIA hæmantha.

Crimson Alstroemeria.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆE. *Brown prodr. novæ-poll. p. 206.*

Sect. IV. ALSTROEMERIÆ.

ALSTROEMERIA. Suprà fol. 15.

A. hæmantha, caule erecto, foliis lineari-lanceolatis glabris tortuosis margine ciliatis, pedunculis ramosis umbellatis, perianthii foliolis 3 exterioribus ovato-lanceolatis serratis.

Alstroemeria hæmantha. Ruiz. et Pavon fl. peruv. et chil. 3. p. 60. Schult. syst. veg. 7. p. 738.

Root composed of many cylindrical, white, fleshy tubers, about the thickness of one's finger, but attenuated towards their insertion. *Stems* erect, from two to three feet high, cylindrical, smooth, and glaucous, scarcely so thick as a goose quill. *Leaves* scattered, pointed, glaucous, and smooth on both surfaces, fringed at the margin with slender cartilageneous teeth; they are twisted at the base, which gives them an oblique, horizontal direction, and are about three inches long, with from four to ten lines in breadth; the *lower ones* are lanceolate; and the *upper ones* linear, or linear lanceolate. *Flowers* of a deep orange-red, about the size of those of *A. Simsii*, and, like them, umbellate. *Peduncles* from two to three inches long, filiform, smooth, purplish, mostly branched with two or three flowers, rarely simple, surrounded at the base by a whorl of leaves, and each branch having a single linear, pointed, fringed, leafy bractea at its insertion. *Perianthium* composed of six leaves, over-lapping each other, and contracted into a short tube at the base; three *outer ones* broader, ovate, lanceolate, somewhat spathulate, serrated along the edges of the lamina, spreading, and somewhat recurved, of a uniform deep orange-red, with greenish thickened points; three *inner*

ones lanceolate, pointed, entire; the two upper ones narrower, erect, marked with yellow and dark purple stripes; the lower one variegated with crimson, broader, and spreading. *Stamens* 6; the three *outer ones* rather longer: *filaments* slender, awl-shaped, smooth: *anthers* oblong, two-celled, bursting lengthways; those of the outer stamens fade before the three others are ripe. *Ovarium* somewhat spherical, with six prominent angles. *Style* slender, angular, smooth, about the length of the stamens. *Stigma* trifid, with narrow, blunt, papillary, recurved lobes.

Introduced by seeds from Chile, by Lady Oakes, in whose interesting collection, at Mitcham, the plant flowered, for the first time, in July last. It is clearly the *A. hæmantha* of Ruiz and Pavon, who remark, that the species varies much in colour, which induces us to believe, that they have, and, perhaps, justly, included in it the *A. Flos Martini*, *rosea*, and *tricolor*, with some others of similar habit, and equally difficult of definition. It is very nearly related to *A. Simsii*, given at TAB. 267, of the first series of this work, and is principally distinguished from it by the three outer leaves of the perianthium being serrated, which in that species are nearly, if not quite entire. Found by Ruiz and Pavon, on hills, and in waste grounds, in the Province of Rere, Chile, flowering in December and January.

We are obliged to Lady Oakes for the opportunity of giving a figure and description of this elegant, and, hitherto, little known plant, which appears to require the same treatment as *A. Simsii*. *D. Don Mss.*



1. Three inner Stamens. 2. Three outer ones. 3. Pistil.



ADENÓPHORA verticillata.

Whorl-leaved Adenophora.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr. fl. novæ-holl.* p. 559.

ADENOPHORA. Suprà fol. 108.

A. verticillata, foliis radicalibus petiolatis subrotundo-ovatis serratis; caulinis subsessilibus lanceolatis verticillatis, dentibus calycinis linearibus acutis, stylo corollæ subtubulosâ duplò longiori.

Adenophora verticillata. *Fisch. adumb. gen. Aden.* p. 5. *Alph. De Cand. Monog. Camp.* p. 356.

Campanula verticillata. *Pall. reis.* 3. p. 719. *t. G. f.* 1. (bona) *ed. gall.* 4. p. 376. *t.* 34. *Linn. fr. Suppl.* p. 141. *Lam. dict.* 1. p. 582. *Rœm. et Schult. syst.* 5. p. 116.

Campanula tetraphylla. *Thunb. fl. jap.* p. 87. (ex *Alph. De Cand.*)

Root perennial, thick, and fibrous. *Stems* from two to three feet high, perfectly straight, and simple, cylindrical, smooth, and hollow, scarcely exceeding the thickness of a crow-quill. *Leaves* smooth and shining, rather pale below; *radical ones* rounded-ovate, sharply serrated, flabellately nerved, on long slender footstalks; those of the stem nearly sessile, mostly in whorls of from three to six together, sometimes, especially towards the top of the stem, scattered, lanceolate, acute, serrated from the middle upwards with rather distant teeth, narrow, and attenuated towards the base, of from two to three inches long. *Flowers* drooping, disposed in a terminal racemose panicle, frequently arranged in whorls, as the leaves. *Teeth of the calyx* linear, or linear-lanceolate, pointed, slightly scabrous, and entire, about half the length of the corolla, which is comparatively small, rather tubular than campanulate, of a pale blue, with shallow pointed lobes. *Filaments* elastic, narrow, linear and smooth in their upper half, becoming broad, membranous, connivent, and bearded towards the base. *Anthers* pale yellow,

about half the length of the filaments, composed of two narrow parallel cells, which open lengthways. *Style* twice as long as the corolla, attenuated, and very slender towards the base, where it is inserted into the centre of the elevated, pentagonal, glandular, orange disk; thickened, and somewhat clavate upwards. *Stigma* composed of three oblong, blunt revolute lobes, which, together with the upper half of the style, are clothed with minute, glandular papillæ. *Capsule* somewhat globular, with prominent ribs, composed of three cells, with three lamellar placentæ, alternating with the dissepiments, and opening at the base by three holes. *Seeds* flat, oblong, slightly concave on one side, of an orange colour, with a pale yellow prominent raphe.

A singular and rare species, native of meadows, on the banks of the River Dovolgin, and near the village of Argun, in Eastern Tartary. It was first noticed by Messerschmid, and a description and figure of it is given by Pallas, in the Appendix to his travels. The plant has been but recently introduced by Mr. Anderson, of the Chelsea Botanical Garden, from seeds communicated by Dr. Fischer; it flowered, for the first time, in July last, in the abovementioned garden, where our drawing was taken.

The flowers, in the cultivated specimen, are larger, and less often disposed in whorls than in the wild one.

The very natural group to which this species belongs, was first separated from *Campanula* by Dr. Fischer, and the genus has been adopted by M. Alphonse De Candolle, in his valuable Monograph of this family; but notwithstanding these authorities, the propriety of considering it as a separate genus may well be questioned, since it is only distinguished from *Campanula* by the elevated glandular disk into which the style is inserted.

The plant succeeds well in the open border, in a soil composed of sandy peat and loam, and is readily increased by seeds, or by parting the root. *D. Don Mss.*

The generic name will be found explained at fol. 108, of the present series.



1. Calyx. 2. Corolla laid open. 3. Stamens. 4. Pistil.



2. 1877

Cypripedium

CYPRIPEDIUM humile.

Two-leaved Ladies-Slipper.

Natural Order. ORCHIDÆ. *Brown prodr.* 309.

CYPRIPEDIUM. *Suprà fol.* 1.

Sect. VI. DIANDRÆ. *Stamina* 2 *antherifera.*

C. humile, foliis radicalibus geminis oblongo-ovatis obtusis, scapo aphylo unifloro, lobo columnæ rhomboideo acuminato deflexo, labello perianthii laciniis longiore antice fisso.

Cypripedium humile. *Willden. sp. pl.* 4. p. 144. *Hort. Kew. ed. 2. v. 5. p. 221.* *Salisb. Linn. trans. 1. t. 3. f. 4.* *Pursh fl. amer. sept. 2. p. 595.* *Spreng. syst. 3. p. 746.*

Cypripedium acaule. *Hort. Kew. 3. p. 161.* *Botan. magaz. 192.*

Root perennial, consisting of a tufted bunch of fleshy fibres. *Leaves* rarely more than two, oblongly ovate, obtuse, glossy, but clothed on both sides with soft villous short hairs, strongly ribbed underneath, plaited, and channelled above. *Scape* erect, from a span to nine inches high, one-flowered, thickly clothed with short villous hairs. *Bractea* lanceolate, acute, keeled on the back, thickly clothed with short hairs, that are tipped with small glands. *Ovarium* short, angular, densely clothed with glandular hairs. *Leaves of the perianthium* ovate, the upper and lower ones ovate-lanceolate, clothed with short glandular hairs, strongly nerved; side ones narrower, taper-pointed, unequal sided, and bearded near the base. *Label-lum* large, purplish, longer than the leaves of the perianthium, split longitudinally on the upper side, strongly and numerously nerved, rugose, densely bearded inside, the hairs near the base purple. *Column lobe* rhomboid, acuminate: side lobes short, spreading, each producing an anther. *Stigma* large, fleshy, spatulate, slightly fimbriate, and clothed with short glandular hairs.

Native of North America, on dry mountains, bogs, and in shady situations. Introduced to our gardens in 1786, but

the species is still far from common. It generally forms part of the American border, requiring a peat soil; and is increased by parting the roots, which, however, should be done but seldom; for unless the plant is strong it rarely blossoms.

Our drawing was taken at Mr. Dennis's Nursery, Chelsea.

For the explanation of the generic name, see fol. 1 of the present series.





M. d. d.

Mimulus lewisii Nutt.



Epipactis atrorubens

Epipactis atrorubens L.

CALCEOLARIA Martineauæ.

Miss Martineau's Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr. v. 1. p. 433.*

CALCEOLARIA. Supra fol. 130. series 2.

Sect. II. STAMINA (2.) ANTHERIFERA.

C. Martineauæ, cæspitosa, herbacea; foliis petiolatis ovatis obtusiusculis dentato-serratis penninerviis suprà mollissimo-tomentosis subtùs hirsutis, corymbis 2-8-floris, labio superiore oblongo concavo; inferiore apice ruguloso-crenato appendiculato intùs sanguineo-variegato.

Calceolaria Martineauæ. *Low's Mss.*

Plant much tufted at the base, producing many shoots, which are covered with glandular hairs. *Leaves* all petiolate, ovate, a little obtuse, attenuated at the base, regularly feather-nerved; upper side very soft to the touch, like velvet, the feather-nerves being deeply channelled; under side clothed with long hairs, and small scale-like bristles, serrately toothed. *Petioles* rather long, flat on the upper side, and convex below, hairy on both sides. *Flower-stems* leafy, rarely above a foot in height, forked, tinged with purple to the first joint. *Peduncles* upright, or a little drooping, covered with numerous very unequal glittering hairs, as is also the whole of the flower-stem. *Flowers* by two's, or three's; *lower ones* in pairs, terminal ones in threes. *Calyx* peltate, deeply 4-cleft; *segments* broadly ovate, bluntish, concave on the inside in the bud state, spreading, densely covered with hairs, and fringed; upper one much recurved on both sides, inclining to revolute; the next 2 recurved a little on the outside, lower one quite flat. *Corolla* 2-lipped; *upper lip* rounded, almost pointed, curved inwards, or somewhat revolute, clothed with yellow hairs: *lower lip* scarcely inflated, rather narrow upwards, but widening abruptly to a broad end, which is undulate, and slightly crenate, with a

thickened margin passing down on each side from the top, and joined to the lappet, which does not quite cover the hole inside; from beneath the lappet is produced a most singular and curious appendage, when cut through, of a thick and fleshy substance, which is bent inwards at the end, distinctly crenulate, connected to the lower lip, which is altogether below it; the inside of the corolla is marked with lines and patches of various forms and shapes, which appear like inscribed characters of a red purple colour. *Stamens* 2, inserted in both sides of the upper lip, thick, and fleshy, tapering to the point, and inserted between the lobes of the anthers: *lobes* egg-like, white, roundly oval, furrowed on the outside, and bending downwards towards each other.

This elegant plant is the offspring of *Calceolaria Fothergilla*, fertilized by *Corymbosa*, and was raised by Mr. Blair, Gardener to John Martineau, Esq. at Stamford Hill. It has been named in compliment to Miss Martineau, a young Lady of great botanical taste.

Our drawing was taken at Mr. Low's Nursery, Upper Clapton. The plant flowers freely in the open border, from April to August, requires a light rich earth, and is increased by parting the roots.



1. Calyx. 2. Base of the Corolla, with the Stamens. 3. Style.



Galanthus plicatus

CLAYTÔNIA virginica.

Virginian Claytonia.

Natural Order. PORTULACEÆ. *DC. prodr.* 3. p. 351.

CLAYTONIA. *Calyx* disepalus, persistens; sepalis ovatis, oppositis. *Petala* 5, obcordata aut obovata (raro elliptica) hypogyna æqualia unguiculata, unguibus basi subconnatis. *Stamina* 5 ad ungues petalorum inserta. *Ovarium* sessile. *Stylus* 1 trifidus, ramulis intus stigmatosis. *Capsula* 1-locularis, 3-valvis, 3-sperma. *Fila conductoria* 3 antè fecundationem à placentâ centrali ad styli basin directa. *Semina* sessilia.—*Herbæ glabræ, subsucculentæ, sæpius perennes. Folia integerrima, radicalia petiolata, summa sæpius opposita, sessilia, interdum connata. Racemi terminales. Flores albi aut rosei.* *DC. prodr.* 3. p. 360.

C. virginica, foliis elongato-linearibus utrinque acutis uninerviis summis sessilibus, racemi pedicellis solitariis ebracteatis, sepalis ovatis obtusis, petalis obovatis retusis.

Claytonia virginica. *Lin. spec.* 294. *Pursh. fl. amer. sept.* 1. p. 175. *Spreng. syst.* 1. p. 791. *Pluk. phyt.* 272. t. 102. f. 3.

Root tuberous, very large, producing numerous leaves and scapes. *Leaves* rather succulent, long and narrow, elongated, linear-lanceolate, acute, tapering to both ends, one-nerved, smooth and glossy, of a dark green above, paler beneath: lower ones attenuated down the long slender foot-stalk; those of the stem opposite, sessile, channelled. *Scapes* radical, smooth and glossy, each bearing two leaves, and a many-flowered raceme, the lower part faintly stained with red. *Racemes* drooping, and involute before the expansion of the flowers, afterwards becoming erect. *Flowers* white, alternate. *Pedicles* smooth and glossy, one-flowered, erect when the flower is expanded, afterwards recurved. *Calyx* of two sepals; the sepals broadly ovate, concave inwards, striate on the back, bluntly rounded at the points; the margins membranaceous. *Petals* 5, twice the length of the calyx, obovate, with a small notch at the end, and slightly crenulate, veined, the veins at first faint, and scarcely perceptible, but

afterwards becoming more distinct, and stained with red. *Stamens* 5, inserted in the claws of the petals: *filaments* smooth and glossy, attached to the back of the anthers: *anthers* flesh-coloured or pale red, two-lobed, slightly sagittate at the base. *Ovarium* smooth. *Style* smooth, trifid, the segments spreading, and terminated by blunt Stigmas.

An elegant little herbaceous perennial, native of North America, in moist woods. It requires a peat soil, and is readily increased both by parting the roots, and by seeds.

Our drawing was taken at the Botanical Garden, Chelsea.

The genus was named by Linnæus, after Dr. John Clayton who collected the materials of the *Flora Virginica*, published by Gronovius, in which work the present species is described.



1. Calyx. 2. Petal, with a Stamen. 3. Style.



Scilla maritima L.

Scilla maritima L.

CORBULÀRIA serótina.

Late flowering Hoop-petticoat.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr.* 1. p. 296.

Div. I. Radix bulbosa. Flores spathecei, umbellati, raro solitarii.

Sect. V. NARCISSINEE. Supra folio 145, series II.

CORBULARIA. *Perianthium* tubulosum; *segmentis* angustis, exiguis, patentibus, aut subrectis, coronâ truncatâ plerumque brevioribus. *Stamina* 6: *filamentis* perianthii basi insertis declinatis apice adscendentibus: *antheræ* incumbentes, versatiles, curvatae. *Ovarium* subturbinate cylindricum, triloculare, trivalve. *Ovula* numerosa, quadrifariam inserta. *Bulba parva.* Folia *angusta, semicylindrica*, supra *planiuscula*. Scapi *plerumque uniflori* raro *biflori*.

C. serotina, foliis semicylindricis elongatis atroviridibus contortis semistriatis supra planiusculis, coronâ turgidâ truncatâ integerrimâ rugulosâ, stylo filamentorum longitudine incluso.

Corbularia serotina. *Haworth Menog. Narcis. in Swt. Brit. flor. gar. n.* 25. ser. 2. p. 1. edit. 2. p. 1.

Narcissus turgidus. *Salisb. prod. stirp. hort. Chap. Allert. p.* 222.

Narcissus Bulbocodium. *Botan. magaz. t.* 88. non *Linnaei.* (testante ejusdam herbario.)

Pseud. Narc. serotinus. *Park. par. p.* 106. tab. 107. f. 8.

Bulb small, rounded at the bottom, and tapering towards the leaves, somewhat like an onion, shell covering of the bulb, very thin, of a pale brown, sometimes decaying, and leaving the bulb naked altogether when in flower. *Roots* or *fibres*, some fleshy and succulent, others filiform and longer, some producing other fibres of a very small size. *Leaves* 2, 3, or 4 from each bulb, tapering to a long slender point; some on our plants, from the root to the point, a foot and a half in length, bent and twisted in various directions, of a very dark green, semicylindrical, and striated at the back, and flat on the upper surface, and slightly channelled. *Scapes* in our plant six inches from the bulb to the spathe, slightly flattened. *Spathe* membranaceous, tubular at the base, that incloses the peduncle, the upper part split, and tapering to an acute point, but not reaching to the end of the tube.

Peduncle half an inch in length: *tube* narrow at the base, and inflated gradually upwards: *segments* six, narrow, about half an inch in length, tapering to a point, green down the back, that extends to the base of the tube; the edges yellow, which also extends nearly to the base, and gives an appearance of being furrowed when growing, from the shadow of the yellow on the green. *Crown* about three-fourths of an inch in length, of a bright yellow, gradually spreading, and becoming wider to the top, where its extent across is about an inch, sometimes extending to three lines more, marked up the crown with several deepish channels, which makes it rather uneven at the top, and ridged inside: top entire, not lobed, or crenate: *tube* and *crown* an inch and half in length. *Stamens* 6; *filaments* inserted in the base of the perianthium, declining, the points curved upwards, and recurved a little inwards: *anthers* incumbent, versatile, or easily moved, curved. *Ovary* somewhat turbinate, cylindrical, 3-celled, 3-valved; *ovula* numerous, disposed in four rows, seated on two septa in each valve. *Style* about the length of the stamens, also first declining, but ascending at the end. *Stigma* capitate.

The *Corbularias* being natives of the South of Europe chiefly, require a very slight protection in severe Winters; they thrive best in a light loamy soil, and a sheltered situation; but also succeed well in pots, if treated as bulbous frame plants. The present species, if occasionally transplanted when the bulbs are quiescent, succeeds, also, in the open ground.



1. Stamens. Style 2. .



IRIS Amœna.

Lovely Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

IRIS. Suprà fol. 11, et 56. Series 2.

I. amœna, barbata; scapo ramoso folia rectiuscula subæquante, spathis foliaceis, supremâ biflorâ, petalis inferne conniventibus. *Rœm. et Schult. syst. veg.* 1. p. 466. *Redouté Liliac.* 6. t. 336.

Root composed of oblong, yellow, branched tubers. *Scape* cylindrical, branched, many-flowered, smooth, solid, occasionally furnished with one or two leaves, a foot, or a foot and a half high. *Leaves* broadly ensiform, erect, about half the length of the scape, of a pale glaucous hue, strongly ribbed. *Spathes* leafy, green, ovate, acuminate, hollow, and folded round the tube of the perianthium, which they rarely exceed in length. *Perianthium*, with the tube, cylindrical; the 3 outer segments cuneiform, entire, of a rich violet purple, beautifully veined downwards, with a white ground, the edges and apex recurved, strongly bearded with yellow hairs; inner ones spathulate, connivent, waved and entire, white, with narrow claws, which are marked with purple lines. *Filaments* subulate, white. *Anthers* pale yellow. *Stigmas* erect, cloven, pointed, and serrated at the apex.

Long cultivated in the Dutch gardens, whence it has been imported into our own. Its native country is unknown. Our drawing was derived from the collection of Robert Mangles, Esq. at Sunning Hill, Berks: it is an elegant

plant, and is well worth cultivating, thriving best in a rich loamy soil, and is readily increased by parting the roots.



1. An outer segment of the perianthium.
2. Stamens, and a portion of the Stigmas.



DIANTHUS aggregatus.

Crowded Pink.

Linnean Class and Order. DECANDRIA DIGYNIA.

Natural Order. CARYOPHYLLÆ. *Juss. gen. p.* 299.

Tribus I. SILENÆ. Sepala coalita in tubum cylindraceum apice 4-5-dentatum. *DC. prodr. 1. p.* 351.

DIANTHUS. Suprà fol. 23. Series 2.

Sect I. ARMERIASTRUM. Flores capitati vel corymbosi, sessiles vel pedunculati.

§. 3. *Bracteis ovatis vel lanceolatis, calycibus vix striatis glabris.*

D. aggregatus, floribus aggregatis sessilibus, squamis calycinis ovatis longè cuspidatis membranaceis tubo longioribus, foliis lanceolatis ciliato-scabris nervosis, caule asperiusculo.

Dianthus aggregatus. *Poir. supp. 1. p.* 124. *DC. prodr. 1. p.* 356. *Swt. hort. brit. ed. 2. p.* 49.

Perennial. *Stems* upright, branched, somewhat woody at the base, slightly angular and scabrous, strongly knotted at the joints. *Branches* terminated by one or more fascicles of flowers. *Leaves* opposite, lanceolate, acute, faintly 5-nerved, attenuated towards the base, where they are connate; margins rough, with short rigid glandular hairs; smooth on both sides, and of a dark green colour; those of the leaf-shoots broader and oblong; of the flower-stems lanceolate, and sharper at the point; the uppermost almost serrulate at the edges. *Flower-stems* bluntly angular, the branches terminated by a simple or 2 or 3 forked close head of flowers. *Flowers* many, aggregate, sessile, or nearly so, with numerous bractes, which are linear, taper-pointed, membranous towards the base, and fringed. *Scales* at the base of the calyx, four, broad at the base and membranaceous, tapering to a long subulate point, a little longer than the tube of the calyx and slightly fringed. *Calyx* tubular, smooth, somewhat rugose, marked, 5-toothed: *teeth* straight, ovate, tapering to a slender point. *Petals* 5, spreading flat, very broad and

rounded, toothed with many sharp teeth, tapering downwards to a long slender claw ; the limb of a bright crimson, when first expanded, afterwards changing to a dark purple, and marked towards the base with a darker irregular patch, bearded with a few long scattered hairs ; the underside of a paler colour. *Stamens* 10, inserted in the receptacle, surrounding the ovarium. *Filaments* smooth, slender, connected at the base. *Anthers* purple. *Ovary* pedicellate, smooth. *Stigmas* spreading, densely pubescent on the inner side, the points somewhat bent and twisted.

The native country of this plant is unknown, and hence we are inclined to think it probably originated in some garden. It is closely related to *Dianthus barbatus*, of which species it may be, perhaps, only a variety ; but it is a highly ornamental plant, and, therefore, deserving of a place in every flower garden. The plant is perennial, delighting in a light soil, and is increased by cuttings or by seeds, which it perfects in abundance. We are indebted to Mrs. Marryat for the opportunity of figuring it.

For the explanation of the generic name, see folio 23.



1. Calyx. 2. Petal. 3. Stamens. 4. Pistil



MALESHERBIA coronata.

Crowned Malesherbia.

Linnean Class and Order. MONADELPHIA PENTANDRIA.

Natural Order. MALESHERBIACEÆ. *D. Don in Edinb. Phil. Journ. Jan, 1827. p. 321.*

MALESHERBIA. *Perianthium* monophyllum, tubulosum, membranaceum, coloratum, 10-fidum : *segmentis* æstivatione imbricatis ; *interioribus* 5 petaloideis coronâ : *faux* coronâ continuâ brevissimâ membranaceâ v. dentatâ v. 10-lobâ persistenti ornata. Stamina 5, hypogyna, apici columnæ inserta. *Antheræ* incumbentes, biloculares, longitudinaliter dehiscences. *Ovarium* apici columnæ adnatum, 1-loculare : *ovulis* erectis, biseriatim indefinitis, funiculo umbilicali stipitatis. *Styli* 3, capillares, persistentes, valvis capsulæ alternantes, et inter ipsarum bases inserti. *Stigmata* simplicia, clavata, disco concavo pruinoso. *Capsula* 1-locularis, polysperma, valvis 3 apice dehiscens. *Placentæ* : *costæ* 3, prominentes, funiculis persistentibus seminiferis stipatæ, parieti capsulæ infra dehiscentiæ locum insertæ, axi valvarum perpendiculares. *Semina* obovata, striata, apice strophiolâ fungosâ laceratâ, basi umbilico tuberculiformi aucta : *testâ* exteriore crustaceâ, crassiusculâ ; *interiore* cartilagineo-membranaceâ : *albumen* copiosum, carnosum. *Embryo* erectus, axillis : *cotyledones* orbiculatæ : *radicula* teres, recta, obtusissima, cotyledonibus longior, centrifuga.

Plantæ (Peruviæ et Chili apricis propriæ) *erectæ, ramosæ, pubescentes, caule sæpè infernè suffruticoso*. Folia *alterna, simplicia, extipulata*. Flores *axillares v. terminales, solitarii, sessiles*.

** *Perianthio campanulato : fauce dilatatâ. Chilenses.*

M. coronata, glanduloso-pubescent ; foliis linearibus sinuato-dentatis, perianthii fauce dilatatâ, coronâ simplici erosè dentatâ, ovario globoso. *D. Don in Edinb. Phil. Journ. Jan. 1832.*

Herba minutè pubescens, cinerea, glandulisque pedicellatis copiosè ornata. *Caulis* erectus, teres, sesqui v. tripedalis. *Folia* brevissimè petiolata, elongato-linearia, obtusa, basi attenuata, 3-5-pollicaria ; *inferiora* grossè sinuato-dentata ; *superiora* plerumque integerrima, densè glandulosa. *Flores* violacei, paniculati. *Perianthium* tomentosum, copiosè glandulosum, pollicare : *faux* dilatata, in tubum gradatim attenuata : *limbus* fauce longior ; *laciniis exterioribus* elliptico-oblongis, obtusis, trinerviis, reticulato-venosis ; *interioribus* ovatis, acutiusculis, basi angustatâ subunguiculatis, venosis, brevioribus : *coronâ* simplici, brevissimâ, tenuissimè membranaceâ, erosè dentatâ. *Filamenta* complanata, glabra, basi in columnam elongatam connata. *Ovarium* globosum, tomentosum, columnæ staminalis longioris apici insidens. *Styli* 3, terminales ! longissimi, capillares. *Stigmata* paullò dilatata. *D. Don in loc. cit.*

We are indebted to our friend, Mr. Thomas Brown, of the Highgate Nursery, for the opportunity of publishing a figure of this remarkable plant, which we did not anticipate

the pleasure of having so soon to record as an inhabitant of our gardens. It belongs to a small but interesting family of plants peculiar to South America, and as far as we yet know, to Peru, and Chile; those of the former country being distinguished by a strictly tubular perianthium. Two species only have been recorded by former botanists; to those we have had the satisfaction of adding four more species, besides the one now under consideration, which we can scarcely believe to be the same with the *Gynopleura linearifolia*, of Cavanilles; the smallness of its flowers, the deeply parted crown, the elliptical ovary, and the plant being clothed with shaggy hairs, appear sufficient to warrant us, in the absence of more direct evidence, in keeping them apart. The present, as well as our *M. humilis*, and some others, is annual, and was raised by Mr. Brown from seeds collected in Chile, by Mr. Hugh Cuming, from whose rich herbarium we had previously described the species. The plant flowered, for the first time, in September last; it requires a light sandy soil, and is increased by seeds.

The genus was dedicated to the memory of M. Lamoignon de Malesherbes, some time President of the Court of Aids, and Minister of State in the reign of Louis the Sixteenth, whose disinterested and zealous advocate he afterwards became before the National Convention. M. de Malesherbes was a distinguished philosopher, and an active promoter of botany and horticulture, in which sciences, as well as that of agriculture, he took great delight. He was unquestionably one of the most spotless and exemplary characters of his time; but nothing could save him from the vengeance of the accursed crew, which, under the banner of liberty, then deluged France with blood, being, at the age of seventy-three, dragged, together with his only daughter, to the scaffold; affording a fearful warning of the extremes to which popular assemblies may be led when once beyond the reach of the laws.

D. Don Mss.



1. Leaf. 2. Pistil.



CALCEOLARIA Atkinsiana.

Mr. Atkins's Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

CALCEOLARIA. Suprà fol. 130. Series 2.

C. Atkinsiana, herbacea, lanuginosa; foliis radicalibus spatulatis erosè dentatis rugosis, floribus corymbosis, corollæ labio inferiori orbiculato saceato subcrenato fulvo-sanguineo discolori.

The plant is perennial and tufted, throwing out a succession of flowering stems, which are from eighteen inches to two feet in height, forked; the whole clothed with a cottony down, which is more abundant in the early state, or when the plant is young. *Leaves* much wrinkled, coarsely and unequally toothed at the margin; *radical ones* obovate, or rather spatulate, obtuse, with a short winged footstalk from 3 to 5 inches long, and from 2 to 3 broad; those of the stem are seldom more than one or two pair, smaller, ovate, pointed, almost entire, and nearly sessile. *Corymbs* forked, composed of from 10 to 30 flowers. *Peduncles* filiform, clothed with glandular pubescence. *Bractes* in pairs, ovate, entire. *Calyx* parted into 4 broadly ovate, acute segments, covered like the peduncles with a glandular down. *Corolla* bilabiate: *upper lip* small, concave, incurved, yellow: *lower one* large, orbicular, hollow, pouch-shaped, ventricose, of a very deep fulvous red, with a yellow border, and slightly crenate. *Stamens* 2. *Anthers* pale yellow, composed of 2 divaricately spreading lobes. *Ovarium* conical, downy, 2-celled. *Style* awl-shaped, slightly bent at the point.

This splendid hybrid *Calceolaria*, was raised between *C. corymbosa*, and *arachnoidea*, by Mr. James Atkins, Nurseryman, Northampton, to whom we are obliged for the plant whence our drawing was obtained. It is perennial, and

apparently quite hardy, as Mr. Atkins has had plants of it out all last Winter in the open border, without suffering injury from the cold ; and he found them to flower quite as well as those that had been under glass ; but he recommends their being defended from excessive wet by means of an hand-glass, raised so as to admit of a free circulation of air, the plant appearing to be both impatient of wet and confined air. Mr. Atkins finds that peat suits it best ; and he informs us that the original plant, which is placed in a border of that soil, is five feet in circumference, and has sent forth, in the course of the season, upwards of 150 stems, each bearing from 30 to 70 flowers, which is well attested by the samples Mr. Atkins has sent us. The plant is increased by parting only.



1. Calyx. 2. Corolla. 3. Pistil.

CORRECTIONS IN No. XL. AND XLI.

In the absence of the Editor from London, the Plates in the September Number having been incorrectly numbered, the following alterations become necessary, to correspond with the letter-press, viz.—

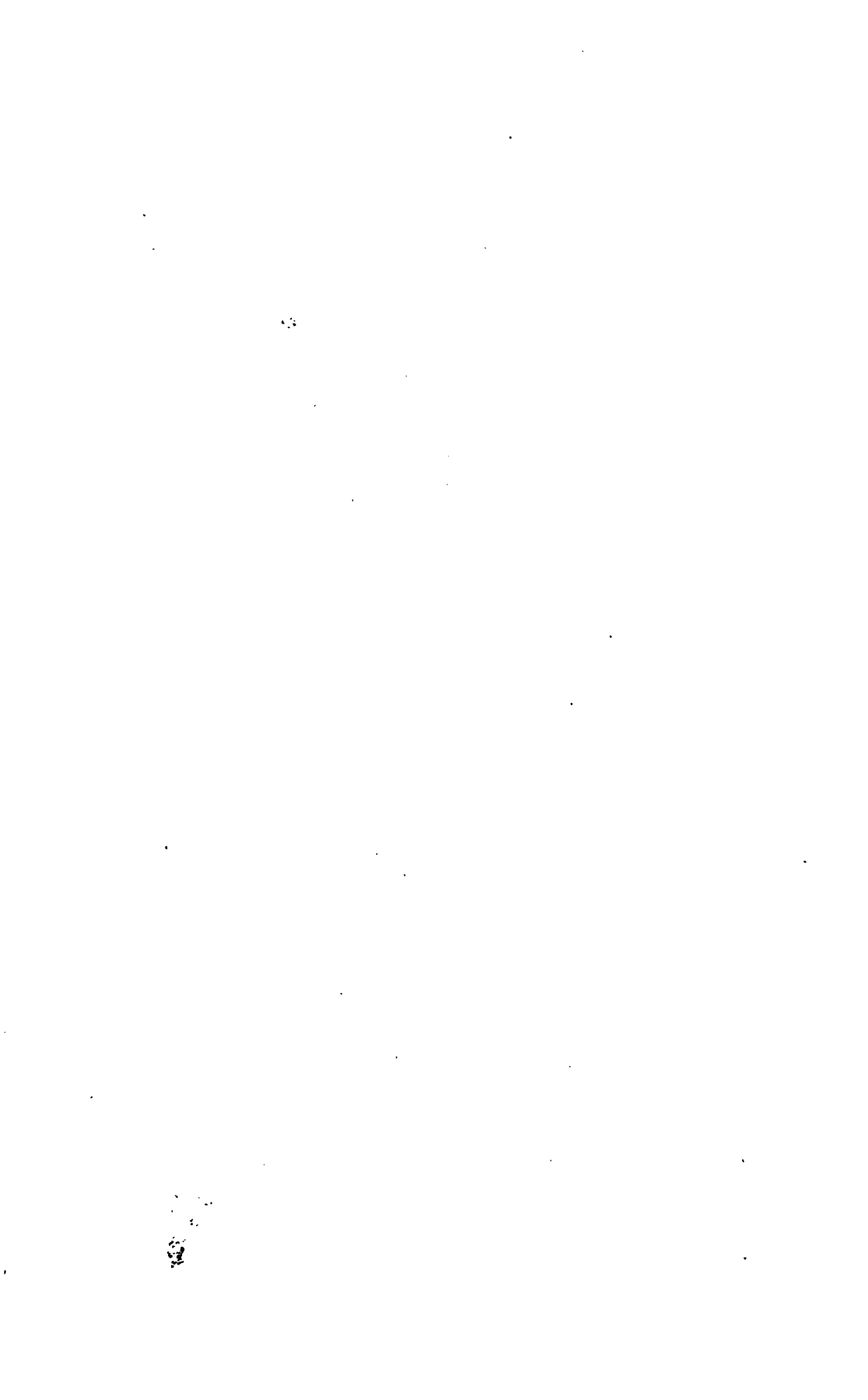
<i>For</i>	160,	<i>read</i>	157.
	157,		158.
	158,		159.
	159,		160.

In the text of Tab. 157, line 10, over leaf, for *Clarke*, read *Clark*.

Tab. 158, line 7, for *propria*, read *proprii*.

Tab. 160, line 15, over leaf, for *Dovolgin*, read *Dorolgin*.

No. XLI. Tab. 164, line 10, for *Bulba parva*, read *Bulbi parvi*.





FRANCOA sonchifolia.

*Caulescent Francoa.**Linnean Class and Order.* OCTANDRIA MONOGYNIA.*Natural Order.* GALACINÆ. *D. Don, in Edinb. Phil. Journ.*
Dec. 1828, p. 53.*FRANCOA.* Suprà fol. 151.*F. sonchifolia*, caudice elongato, calycinis segmentis dilatatis, petalis margine involutis, staminibus sterilibus subulatis, stigmatibus ellipticis integerrimis. *D. Don Mss.**Francoa sonchifolia.* *Cav. icon. 6. p. 76. in notâ. D. Don, in l. c. p. 52.*
Panke sonchifolia. *Willd. sp. pl. 2. p. 487.**Llaupanke amplissimo Sonchi folio.* *Feuill. Peruv. et Chil. 2. p. 742. t. 31.*
(*bona.*)

Herba perennis caulescens, tripedalis. *Radix* fusiformis, fibris numerosis instructa. *Caudex* pedalis v. sesquipedalis, divisus, cylindraceus, foliosus, digiti minoris crassitie. *Folia* ferè *Rapi*, sessilia, basi latè decurrentia, ampla, lyrata, coriacea, spithamæa v. pedalia, utrinque pilis mollibus copiosè ornata, suprà demùm glabriuscula, nitida, gramineo-viridia, parùm rugoso-venosa, subtùs pallidiora, varicosa et copiosius pilosa, costà mediâ crassissimâ, suprà planiusculâ, subtùs rotundâ: *lobis* rotundatis, cucullatis, basi dilatatis, auriculato-cordatis, margine subsinuatis, denticulatis (denticulis glandulâ callosâ nudâ coronatis;) *terminali* maximo, subrotundo-cordato, palmari v. spithamæo. *Pedunculi* terminales, cylindranei, copiosè pubescentes, subtomentosi, simplices v. divisi, pedales v. bipedales, superne attenuati, dum ad ramorum basin folio unico subsimplici lobato-dentato muniti. *Racemus* spicatus, terminalis, palmaris v. spithamæus. *Flores* copiosi, undique versi, pedicellati, bracteâ lanceolato-lineari acuminatâ integerrimâ basi suffulti. *Pedicelli* teretes, tomentosi, bracteâ triplò breviores. *Calyx* tomentosus, 4-partitus: *segmentis* ovato-lanceolatis, dilatatis, trinerviis, 5-plò majoribus quàm in *F. appendiculatâ*, tantùm acutis, nec acuminatis. *Petala* 4, erecta, cuneato-oblonga, obtusa, pinnatim nervosa, marginibus involutis concava, punicea, maculâ oblongâ intensius coloratâ disco ornata, extùs pubescentia, costâ validâ obtusè carinata, vix calyce duplò longiora: *unguibus* albidis. *Stamina* 16, perigyna; 8 *fertilia*, filamentis elongatis, subulatis, glabris, albis: *antheris* bilocularibus, longitudinaliter debiscen-tibus, luteis; 8 *sterilia* subulata, acuta, pallidè flava, vix triplò breviora. *Ovarium* 4-gonum, 4-loculare: *ovulis* subfusiformibus, horizontalibus, parùm adscendentibus, triplici ordine insertis. *Stylus* brevissimus, obconicus. *Stigma* 4-lobum: *lobis* ellipticis, obtusis, integerrimis, conniventibus, car-nosis, post impregnationem patulis, margine paululùm revolutis, superficie prui-nosis, e placentis loculorum collateralium constitutis, hinc cum loculis al-ternantibus. *Capsula* oblonga, tetragona, 4-locularis, calyce ferè duplò longior, vix uncialis: *loculis* polyspermis, apice prominentibus, foramine

dehiscentibus : *valvulis* crustaceo-membranaceis. *Placentæ* duplicatæ, margini interiori *valvularum* longitudinaliter adnatæ, lineari-angustissimæ, demùm solutæ. *Semina* subfusiformia, hinc convexa, inde planiuscula, processibus succulentibus brevissimis inserta, horizontaliter assurgentia. *D. Don Mss.*

Raised by Mr. Anderson, from seeds collected at Conception, in Chile, by an officer, attached to the expedition of our friend Captain King; and the plant whence our figure was derived, blossomed at the Chelsea Botanic Garden, in August last. It is perennial, and succeeds well in the open border, during the Summer months, but requires the protection of a frame, or hand-glass, in Winter; a light soil appears to suit it best, and it is readily increased by seeds. It is distinguished from *F. appendiculata*, already given at Tab. 151, of this Work, by several important marks. The caudex rises to a foot, or a foot and a half; the leaves are decurrent at their base; the segments of the calyx are broader, and less pointed than in the latter; the petals smaller, and incurved at the edges; and the stigmas elliptical, and perfectly entire.

Our former description of this species having been drawn up from rather slender materials, it is, therefore, gratifying to have an opportunity of giving a more complete illustration of a plant, which, although faithfully represented by the accurate Feuillée, has been involved in much obscurity. I take this opportunity, also, of giving the following corrected character of *Francoa ramosa*:—segmentis calycinis ovato-lanceolatis acutis læviusculis, staminibus sterilibus obtusis, stigmatibus cuneatis bilobis, scapo ramoso.

The radical leaves in this last, which my former specimens wanted, are sessile, lyrate, and clothed on both sides with adpressed hairs. The stem, which is as much entitled to be regarded as a scape, as that of *F. appendiculata*, is much branched, and is either glabrous, or pilose; the flowers are pure white, and the segments of the calyx less distinctly nerved, than in the other species, and the point is more or less elongated. I have not referred to the description and figure, by M. Adrien de Jussieu, in the “*Annales des Sciences Naturelles*,” because they evidently do not belong to the present species, but to *F. appendiculata*.

The generic name is already explained, under *F. appendiculata*. *D. Don Mss.*



1. Calyx. 2. Petals. 3. Stamens and Pistil. 4. Capsule.



DRYPIS spinosa.

Prickly Drypis.

Natural Order. CARYOPHYLLÆ. *DC. prodr.* 1. p. 351.

Tribus I. SILENÆ. Sepala coalita in tubum cylindraceum apice 4-5-dentatum.

DRYPIS. Calyx tubulosus 5-dentatus. Petala 5, unguiculata, fauce bidentata, limbo bipartito. Stamina 5. Styli 3. Capsula 1-locularis circumcissa abortu monosperma. *DC. prodr.* 2. p. 388.

Drypis spinosa. *Linn. spec.* 390. *Willden. sp.* 1. p. 1513. *Jacq. hort. vind.* 1. t. 49. *Lam. ill.* 1. 214. *Pers. syn.* 1. p. 331. *Hort. Kew. ed.* 2. v. 2. p. 175. *Ram. et Schult. syst.* 6. p. 680. *DC. prodr.* 1. p. 388. *Botan. magaz.* 2216. *Spreng. syst.* 1. p. 942. *G. Don, gen. syst. of gard. and bot.* 1. p. 418.

A thick, spreading, suffrutescent plant, much branched, and remaining several years: *branches* extending round to a considerable distance, 4-sided, smooth and glossy, ascending. *Leaves* opposite, linear-subulate, rigid, terminating in a sharp spine, remaining persistent on the old stems, but turning dry and brown. *Flowers* numerous, pale lilac, terminating the branches in a many times forked cyme. *Bractes* lanceolate, taper-pointed, broad at the base, with 2 or 3 long spiny teeth on each side. *Calyx* tubular, striated, 5-toothed, the teeth short, with membranaceous margins. *Petals* 5, with a long slender unguis: *limb* deeply 2-parted, and 2-toothed, or crowned at the base: *lobes* lanceolate, bluntish. *Stamens* 5, longer than the petals: *filaments* smooth and slender. *Ovarium* smooth. *Styles* 3, short, and slender. *Stigmas* simple.

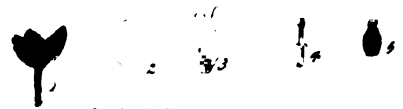
A native of Italy, and Barbary. The plant has been generally regarded as a biennial, but there is no doubt of its being perennial; for the one whence our figure was taken, has stood, for upwards of ten years, on the rock-work, in the Botanical Garden, at Chelsea, where it still continues to

thrive. It appears to be admirably adapted for a rock-work, where it forms a suffrutescent bush, producing its flowers in great profusion, and for several months together. Cuttings, planted in sand, root readily.

The name alludes to the thorny leaves, being derived from *δρυντω*, to tear.



1. Flower. 2. Calyx. 3. Corolla, with the Stamens. 4. Pistil.



L. chinensis

Pub. by J. Ridgway. Dec. 1832.

Flora

BÉRBERIS nervosa.*Nerved-leaved Barberry.**Linnean Class and Order.* HEXANDRIA MONOGYNIA.*Natural Order.* BERBERIDEÆ. *DC. syst. nat. v. 2. p. 1.**BERBERIS.* *Suprà fol. 100.**Sect. II. MAHONIA.* *Suprà fol. 94.*

B. nervosa, foliis 5-8-jugis cum impari: foliolis ovato-oblongis acuminatis sub-5-nerviis margine copiosè dentato-spinosis, petiolis elongatis basi squamatis, racemis elongatis erectis, filamentis apice bi-dentatis. *D. Don Miss.*

Berberis nervosa. *Pursh fl. amer. sept. 1. p. 219. t. 5. (folia tantùm). Hook. fl. amer. 1. p. 29.*

Mahonia glumacea. *DC. syst. nat. v. 2. p. 21. Prodr. v. 1. p. 109.*

Mahonia nervosa. *G. Don, gen. syst. of gard. and bot. 1. p. 118.*

Berberis glumacea. *Schult. syst. 7. p. 19. Spreng. syst. 2. p. 120. Swt. hort. brit. add. p. 584.*

Stem shrubby, scarcely 6 inches high, divided, round, smooth, and glossy. *Leaves* from a span, to a foot long, impari-pinnate. *Leaflets* from 5 to 8 pair, with an odd one, nearly sessile, oblong, dilated, and some nearly an inch and a half broad at the base, and from one and a half to two and a half inches long, generally oblique, tapering to a long slender point, and terminated by a long sharp spinous point; of a dark green colour, smooth and glossy on the upper side; the under side paler, furnished with 5 distinct nerves, which ramify throughout the leaf; margins furnished with from 7 to 9 sharp spiny teeth on each side. *Petioles* elongated, cylindrical, of a dark brown colour, smooth, and glossy, dilated at the base, with membranaceous edges, clasping the stem, the membrane terminating on each side in a sharp upright tooth. *Rachis* cylindrical, with knotty joints. *Scales* several, cartilaginous, persistent, lanceolate, tapering to a long slender point, rolled inwards at the edges, from an inch and a quarter, to an inch and a half in length, dark brown. *Racemes* several, from 3 to 5 inches long, surrounded at the base with the persistent scales. *Pedicles* crowded, sometimes scattered, or rarely verticillate, smooth, each springing from

the axil of a small persistent bracte, generally 1-flowered, but, occasionally, 2-flowered, with a bracte at the base of the upper footstalk; *bractes* and *pedicles* variable in length, the lower bractes longest, lanceolate, acuminate; upper ones ovate, concave, and less acute, but generally terminated by a sharp point, sometimes longer, and other times shorter than the pedicles. *Calyx* of 6 sepals, pale straw colour, disposed in 2 series, the outer ones smallest, ovate, cucullate; inner ones larger, thinner, cucullate, rounded, more resembling the petals, and larger than them; at the base of the outer sepals, are 3 little sepaliform bractes, flatly pressed to the calyx. *Petals* 6, ovate, bluntly rounded, concave, of a bright yellow. *Stamens* 6: *filaments* bearing a tooth on each side at the point. *Ovarium* ovate, attenuated to the point, smooth. *Stigma* large, peltate, orbicular, pustulate.

A very dwarf evergreen shrub, native of the north-west coast of America; first discovered by Mr. Menzies, at the mouth of the Columbia; and, according to Mr. Douglas, common in shady pine forests, along the coast of the Pacific. The species is well distinguished from its other congeners, with pinnated leaves, by the leaflets being traversed from the base, upwards, by several nearly parallel nerves. Pursh, having erroneously added the flowers of *B. aquifolium*, to his plate of *nervosa*, misled De Candolle, who has reproduced the species under the name of *glumacea*. The specimen, in proof of this, exists in the Lambertian Herbarium, with which Pursh's entire collection is incorporated.

The plant thrives best in a mixture of peat and loam, is quite hardy, and is increased by slips. Our drawing is from Mrs. Marryat's collection, at Wimbledon.



1. Outer leaves of the Calyx. 2. Inner leaf of ditto. 3. Petal. 4. Stamen. 5. Pistil.



NIEREMBÉRGIA grácilis.

Slender Nierembergia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆÆ. *Brown prodr.* 1. p. 443.

NIEREMBERGIA. *Calyx* tubulosus, 5-fidus : *lobis* ligulatis, foliaceis. *Corolla* hypocrateriformis : *fauce* nunc ventricosâ ; *limbo* patenti, 5-lobo, 5-plicato. *Stamina* 5, fauci v. tubo inserta, parum inæqualia : *filamenta* elongata, infernè adnata : *antheræ* subrotundæ, bilobæ, biloculares : *loculis* basi parum divergentibus, apice distinctis, rimâ longitudinali exteriùs dehiscentibus. *Ovarium* biloculare, basi disco cyathiformi cinctum. *Stylus* ancipiti-compressus, glaber, apice dilatatus. *Stigma* reniforme, compressum, v. capitatum, viscidum, nunc minutissimè papillosum : *lobis* connato-applicatis, margine revolutis, subinde sulco medio distinguentibus. *Capsula* ovata, bilocularis : *valvulis* bifidis. *Dissepimentum* contrarium (facie ad caulem,) undique rumpens, tandem solutum. *Placentæ* 2, septo adnatæ. *Semina* subreniformia : *testâ* crustaceâ, scrobiculatâ : *albumen* carnosum. *Embryo* teres, arcuatus, albus : *cotyledones* lineari-oblongæ, plano-convexæ : *radiculâ* cylindricâ, cotyledonibus paulò longiori, obtusâ, hilo proximâ.—*Herbæ* (Amer. Austr.) *glandulosæ*, *radice fibrosâ*, sæpiùs *annuâ*. Folia *sparsa*, *integerrima*, *nunc rarè subopposita*. Flores *solitarii*, *pedunculati*, *speciosi*, *albi v. purpurei*. D. Don, in Edin. Phil. Journ. Oct. 1832. (*Char. parum mutat.*)

* *Corollæ* tubo filiformi, *fauce* coarctatâ, *staminibus* erectis subæqualibus summo tubo insertis, *stigmatè* complanato. *Nierembergiæ* propriæ. D. Don Mss.

N. gracilis, foliis lineari-spathulatis, laciniis calycinis lineari-lanceolatis acutis, corollæ limbo tubo breviorè, caule ramosissimo diffuso. D. Don Mss. *Nierembergia gracilis*. Hook. in bot. mag. t. 3108. Grah. in Ed. Phil. Journ. Oct. 1831.

Herba diffusè ramosissima, pubescens, palmaris, spithamæa. *Radix* fibrosa, annua. *Rami* filiformes. *Folia* sparsa, lineari-spathulata, acutiuscula ; *superiora* angustiora linearia ; unguicularia v. semipollicaria. *Flores* breviter pedunculati, racemoso-paniculati. *Pedunculi* oppositifolii, filiformes, unguiculares, pube incanâ glandulisque pedicellatis copiosè vestiti. *Calyx* tubuloso-campanulatus, 10-nervius : nervis viridibus ; *alternis* sinubus insertis, apice bifurcatis ; *interstitiis* membranaceis : *limbo* 5-partito : *laciniis* lineari-lanceolatis, acutis, subcarinatis, patentibus. *Corolla* hypocrateriformis, albida, colore sæpè dilutissimè purpureo suffusa, extùs parcè glandulosa : *tubus* filiformis, ferè pollicaris : *limbus* 5-lobus, 5-plicatus, patulus, *fauce* coarctatâ, flavâ : *lobis* rotundatis, crispatis, brevissimis. *Stamina* 5, faucis ori inserta, erecta, subæqualia : *filamenta* compressiuscula, parcè glandulosa, luteo-albicania : *antheræ* biloculares, adprimùm circa stigma conglutinatæ, flavæ : *loculis* distinctis, longitudinaliter dehiscentibus. *Ovarium* biloculare, basi disco membranaceo cyathiformi circumcingens : *loculis* polyspermis. *Stylus* ancipiti-compressus, apice dilatatus, subalatus. *Stigma* complanatum, lunatum, glutinosum : *lobis* connato-applicatis, lateribus compressis, angulis posterioribus productis arcuatis. D. Don Mss.

The chief distinction between *Nierembergia* and *Petunia*, lies in the form of corolla; the tube in the former being equally contracted throughout its whole length, and the stamina inserted in its mouth; while, in the latter, the tube is dilated upwards, and the stamina inserted within it, at the point where the contraction terminates; but, as these characters are found to vary much in different species, I have, already, proposed to unite them into one, being convinced, that, among the *Solaneæ*, the form of corolla is seldom available as a generic distinction.

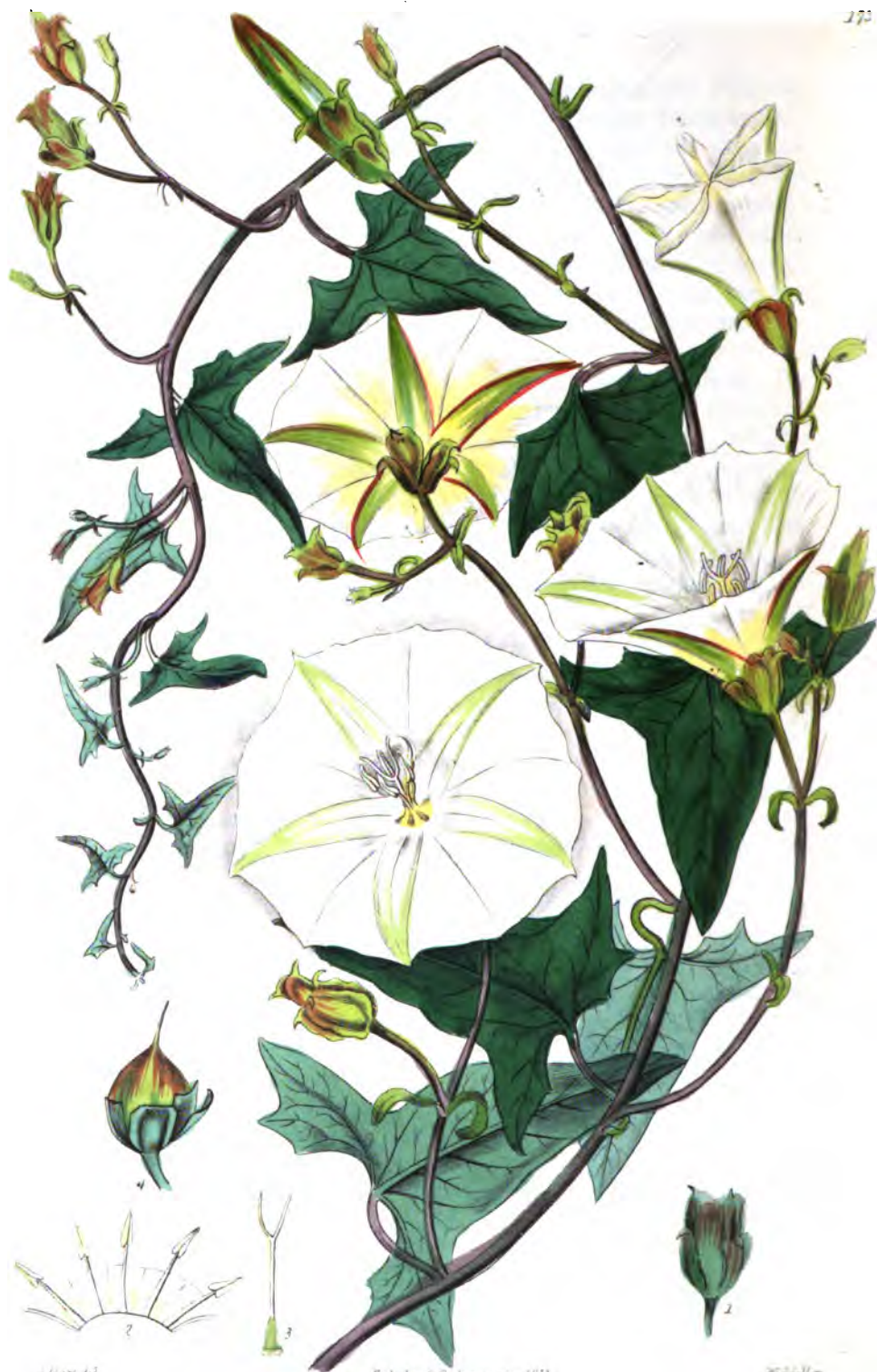
The genus is chiefly distinguished from *Nicotiana*, (in which the form of corolla is, also, very variable in different species,) by the foliaceous segments of its calyx, which, together with its nearly regular pentandrous flower, separate it, also, from *Salpiglossis*, in which the corolla is irregular, and somewhat bilabiate, with only four perfect stamina. The stigma in this last is precisely that of the normal group of *Nierembergia*, and the genus is principally remarkable for its lobed leaves. For the other section, I would propose the following character:—*corollæ fauce dilatata sæpiùs ventricosa, staminibus inæqualibus tubo medio insertis subinclusis, stigmate subcapitato*. To the latter section belongs *Salpiglossis integrifolia*, of Hooker, for which I would suggest the name of *Nierembergia (Petunia) phænicea*.

The present species is a native of the vicinity of Buenos Ayres, where it was discovered by Dr. Gillies, and Mr. Tweedie, and, from seeds, transmitted by the latter, to our valued friend, Mr. Neill, plants were raised, which blossomed in his interesting collection at Canonmills, in the Autumn of last year. The plant, like many others of the same natural family, although apparently annual, will continue to flourish for several years, if kept in the Greenhouse, and is readily increased by cuttings; for, from some unknown cause, it is rarely found to perfect its seeds in this country.

Our drawing was taken at Colvill's Nursery, King's Road, Chelsea, in August last.

The genus was dedicated by Ruiz and Pavon, to John Eusebius Nierembergius, a learned Spanish Jesuit, Author of *Historiæ Naturæ Libri*. D. Don Mss.





2. 11. 18. 18. 18.

Pub. by J. Rodger & Son, 1822.

W. H. Miller.

CONVOLVULUS Scammonia.

Officinal Scammony.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CONVULVULACEÆ. *Brown prodr.* 1. p. 481.

CONVOLVULUS. *Calyx* 5-partitus, nudus, v. bracteis 2 minoribus imbricatus. *Corolla* campanulata, 5-plicata. *Stamina* limbo breviora. *Ovarium* 2-loculare (rard 3-loculare?) loculis dispermis. *Stylus* indivisus. *Stigmata* 2, filiformia. *Capsula* valvata.—*Herbæ* (rard Frutices,) *volubiles* v. *prostratæ*, *sapida lactescentes*. *Brown prodr.* 1. p. 482.

C. Scammonia, foliis sagittatis posticè truncatis, pedunculis teretibus subtrifloris, bracteis lanceolatis a calyce remotis. *Smith prodr. fl. græc.* 1. p. 132. *Fl. græc.* 2. p. 76. t. 192.

Convolvulus Scammonia. *Linn. sp. pl.* p. 218. *Willd. sp. pl.* 1. p. 845.

Hort. kew. ed. 2. 1. p. 328. *Woodv. med. bot.* 1. p. 13. t. 5.

C. Syriacus, et *Scammonia Syriaca.* *Tourn. inst.* p. 83. *Moris. hist.* 2. 12. sect. 1. t. 3. f. 5. *Mill. ic.* 1. p. 68. t. 102.

Scammonia Syriaca. *Bauh. pin.* p. 294.

Scammonium Syriacum. *Ger. em.* p. 866.

Scammonea. *Matth. valgr.* 2. p. 601.

Root perennial, fusiform, very long, of a whitish colour, and abounding in an acrid, milky juice. *Stems* many, herbaceous, branching, slender, twining, leafy, round, and like the rest of the plant, quite smooth, extending often to the length of 10 or 15 feet; the *upper part* slightly angular, with rather prominent reddish lines. *Leaves* alternate, stalked, arrow-shaped, ovate-lanceolate, acute, perfectly entire, smooth, veiny, especially underneath, and of a dark green, about two inches long: *posterior lobes*, truncate, with pointed angles. *Footstalks* semi-cylindrical, slightly channelled above, scarcely equalling the breadth of the posterior lobes of the leaf. *Peduncles* axillary, single, 3-flowered, filiform, about twice as long as the leaves. *Pedicels* scarcely longer than the calyx, rather thickened at the top. *Bractæ* 2, opposite, lanceolate, pointed, spreading, situated at the insertion of the pedicles, with a pair of smaller

seated above the base of the lateral one. *Calyx* imbricate, with unequal, broadly elliptical leaflets; their edges coloured, waved, and somewhat repand, with a short reflexed, abrupt point. *Corolla* campanulate, thrice longer than the calyx, with a widely spreading plaited limb, the colour of a milk white, the underside marked with 5 greenish purple stripes. *Stamens* 5, erect, connivent, whitish, thrice shorter than the corolla. *Style* the length of the stamens. *Stigmas* oblong, erect, distant, white. *Capsule* ovate, pointed, smooth, unilocular, with four thin almost membranous valves. *Seeds* four, erect, grey, 3-sided, the outer side convex.

Independent of the interest attached to the plant, as affording a useful medicine, its beauty claims for it a place in the flower garden, being not unlike our common bindweed in habit, and its blossoms equally showy. The plant delights in a warm situation, and a light soil, and, if trained to a stake, or other support, it will extend its stalks to 10 or 15 feet, which are highly ornamental when in flower, being then copiously adorned with large white blossoms. The scammony that comes from Aleppo, which is also that of the shops, is the produce of this plant, that of Dioscorides being, according to the learned Sibthorp, *Convolvulus farinosus*, which is distinguished by its pubescent stem and cordate leaves, smaller flowers, of a light rose colour, and found in Mysia, Livadia, and the Peloponessus. Dr. Sibthorp found the present species growing wild in hedges in the Island of Rhodes.

Our drawing was taken at the Botanic Garden, belonging to the Company of Apothecaries, at Chelsea, in the course of last Summer. The plant was originally obtained from Smyrna, by Mr. Anderson. It is perfectly hardy, and continues in blossom until late in Autumn, and may be increased by seeds, or parting the roots.

The generic name alludes to the twining habit of many species of this genus, and is derived from the Latin verb *Convolvo*, to turn round, or entwine. *D. Don Mss.*



1. Calyx. 2. Part of the Corolla, showing the insertion of the Stamens. 3. Pistil.
4. Capsule.



1840. 37

Red by J. Ridgw. of Jan 28. 37.

LOBÈLIA speciosa.

Showy Lobelia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.

LOBELIA. Suprà fol. 86, series 2.

L. speciosa, velutina; foliis sessilibus lanceolatis acutis denticulatis, racemo laxo spicato, pedunculis bibracteatis, calycum sinibus reflexis.
Lobelia speciosa. *Hortulan. Bot. Reg. t.*

The whole herb is clothed with a short, downy pubescence. *Root* perennial. *Stems* upright, round, often furnished with a few branches at the top, from three to five feet high. *Leaves* sessile, lanceolate, acute, the margin purplish, and furnished with minute teeth, the *lower ones* from 3 to 7 inches long, and attenuated at the base. *Flowers* many, disposed in loose, terminal, unilateral, leafy clusters. *Peduncles* very short, cylindrical, furnished at the middle with two small, lanceolate bractæ, and at the base with a large, leafy, serrulate one. *Calyx* 5-cleft: *segments* lanceolate, acuminate, minutely toothed, the edges recurved, and slightly waved. *Corolla* the size of *L. fulgens*, of a bright, velvety purple, bilabiate, and cleft along the back. *Segments* lanceolate, acute, the two upper ones narrower, and spreading at right angles. *Filaments* united, dark purple. *Anthers* imperfectly developed, of a sulphur colour, and bearded at the top. *Style* thick, cylindrical, incurved at the top. *Stigma* large, bilabiate, pruinose, the edges slightly revolute, furnished at the base with a circular spreading fringe.

This showy hybrid was, we were informed by our friend, Mr. Mackay, of the Dublin Botanic Garden, detected in a border composed of *Lobelia fulgens* and *cærulea* in a garden in Ireland, but the name of the place we do not, at present, re-

member. Its habit is more robust than that of either parent, and the colour of the flowers, as might be expected, exactly intermediate, being of a rich purple. The plant does not produce seeds, but it appears to grow freely, and is easily increased by parting the roots. It is equally hardy with *L. fulgens*, and, like the other North American species of the genus, it delights in a soil composed of two parts of peat, or vegetable earth, one of loam, and another of river sand.

The generic name is already explained at fol. 86.



1. Stamens and Pistil. 2. Stamen separate. 3. Pistil separate.



BÉLLIUM bellidioides.

Lesser Daisy.

Class & Order. SYNGENESIA POLYGAMIA SUPERFLUA.

Natural Order. COMPOSITÆ. *Adans. fam.* 2. p. 103. Fam. VII.

ASTEREÆ. Cass. *Trib.* BELLIDEÆ.

BELLIUM. *Involucrum* duplici ordine polyphyllum, æquale, hemisphæricum. *Receptaculum* conicum, nudum. *Flosculi radii* ligulati, fœminei; *disci* hermaphroditi, tubulosi, 4-5-dentati. *Antheræ* basi muticæ. *Stigmata* hermaphroditis ovato-lanceolata, densè papillosa; radiis linearia, obtusa, canaliculata, lævia. *Achenia* cuneata, compressa. *Pappus* duplex; *exterior* 4-8-paleaceus, brevis; *interior* pilis 4-8, scabris.—*Herbæ* (Europ. et Orient.) *perennes, cæspitosa, pusilla.* *Folia integra, plerumque radicalia.* *Scapi v. pedunculi filiformes, nudi.* *Capitula solitaria.* *Radius albus.* D. Don Mss.

B. bellidioides, foliis spathulatis integerrimis, flosculis disci 4-dentatis tetrandris! stigmatibus lanceolatis acutis, pappi paleis truncatis. *D. Don Mss.*

Bellium bellidioides. *Linn. mant.* p. 285. *Lam. dict.* 5. p. 7. *ill.* t. 684. (optima.) *Willd sp. pl.* 3. p. 2122. *Persoon. syn.* 2. p. 459. *Spreng. syst.* 3. p. 573.

Bellis droseræfolia. *Gouan ill.* p. 69.

Bellis maritima roris solis foliis, longissimo pediculo donata, cynræa. *Bocc. mus.* p. 149. t. 107.

Planta perennis, densè cæspitosa, pusilla, elegans. *Radix* fibrosa. *Folia* conferta, petiolata, spathulata, obtusa, integerrima, subcarnosa, avenia, glabra, nunc pilis raris adpressis instructa, vix 3 lineas longa. *Petioles* semicylindracei, graciles, semi-pollicares, pilosiusculi. *Scapi* erecti, uniflori, filiformes, tenuissimi, 3-pollicares, adpressè pilosiusculi. *Involucrum* hemisphæricum, duplici ordine polyphyllum: *foliolis* circiter 12, ovato-lanceolatis, obtusiusculis, adpressè pilosis, æqualibus, margine membranaceis, dorso obtusè carinatis, basi callosis. *Receptaculum* pyramidatum, tuberculatum, nudum. *Flosculi radii* 12, ligulati, fœminei, emarginati, rarè 3-denticulati, patentissimi, suprâ nivei, subtùs pallidè purpurei; *disci* hermaphroditi, tubulosi, 4-dentati: *dentibus* ovatis, imberbibus. *Stamina* 4, medio tubo inserta: *filamenti* capillaria, glabra, elastica: *articulo superiore* crassiori, brevissimo: *antheræ* aureæ, in tubum coalitæ, basi muticæ, appendiculâ ovato-lanceolatâ, acutâ, membranaceâ, parvâ coronatâ. *Stigmata* hermaphroditis apicibus lanceolatis, acutis densè papillosis; radiis linearia, obtusa, canaliculata, lævia, recurvata. *Stylus* teres, glaber. *Achenia* cuneata, ancipiti-compressa, adpressè pilosa. *Pappus* duplex; *exterior* paleaceus: *paleis* 4-8, oblongis, truncatis, sæpè erosis, scariosis, argenteis, brevibus; *interior* e pilis tenuissimis, paleolis numero æqualibus iisdemque alternantibus, albis, denticulato-scabris, compositus. *D. Don Mss.*

This charming little plant, which surpasses, even in elegance and beauty, our favourite native Daisy, is found wild in Corsica and the Balearic Islands, in dry maritime pastures. Although introduced many years ago, the plant is still rare in collections, being impatient of much wet, and very liable to be killed in the winter months, if left out in the open border; wherefore, it is advisable to keep it under the protection of a dry pit, or frame, during Winter. It begins to send forth its slender flower-stalks early in Summer, and continues for several months successively copiously adorned with its gay starry blossoms. The plant is usually marked in books as an annual; an error, most probably, derived from the inaccurate reference to *Triumfetti*, as it appears to be perennial in our gardens, and is stated to be so by the accurate Boccone. It is easily increased both by slips and seeds. The four-toothed tetrandous florets of the disk, and pointed stigmas, readily distinguish the species. Usteri states the rays of the pappus to be eight, but in my specimens they were often four, and sometimes five and six, in each series only. I have not referred to the often quoted figure of *Triumfetti*, (*Obs. t. 80.*) because that evidently represents *Bellis annua*, and not the present plant, for whose Italian habitat there appears no better foundation.

The generic and specific names allude to its close relationship to the Daisy, *Bellis*, which name is derived from the Latin *bellus*, pretty, and from which the present genus is chiefly distinguished by its paleaceous seed-crown. *D. Don Mss.*



1 & 2. Ray Florets. 3. Floret of the Disk. 4. Involucrum and Receptacle.



GLADIOLUS pudibundus.

Blush-flowered Corn-flag.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

GLADIOLUS. Suprà fol. 155. series 1.

G. pudibundus, floribus subresupinatis, genitalibus declinatis, perianthii tubo spathâ brevioris : laciniis ovato-lanceolatis obtusis undulatis recurvato-patentibus.

Stem from two to three feet high, straight, cylindrical, smooth. *Leaves* broadly ensiform, acuminate, ribbed, of a pale green. *Flowers* large, of a brilliant rose colour, about 10 in number, distantly alternate, and disposed in a distichous spike, from the twisting of the base somewhat resupinate. *Spathes* composed of two valves, which are lanceolate, ribbed, terminated by a long sharp point, and rolled round the tube of the perianth; *the inner one* shorter. *Perianth* with the tube considerably shorter than the outer spathe; the *limb* divided into 6 broad, ovate-oblong, blunt segments, which are recurved at the points, and wavy at the margin; the *lower* 3 narrower, marked with a pale, whitish, lanceolate spot, having a deep red edge. *Filaments* and *Style* declinate, white. *Anthers* purple. *Stigmas* linear-cuneate, notched, concave, copiously papillose.

This is a hybrid offspring, we believe, between *Gladiolus cardinalis* and *blandus*, and was raised by the Honourable and Rev. William Herbert, to whom we are obliged for the specimen figured in the plate. It is an extremely showy plant, and therefore cannot fail to become an universal favourite with

florists. It will doubtless require the same treatment as *G. cardinalis*, and, like it, readily increased by offsets.

The generic name, meaning, literally, a small sword, refers to the sword-shaped leaves common to this genus.



1. Portion of the tube of Perianth, with Stamens. 2. Style and Stigmas.

*S. Punct. del.**Painted by J. B. Dyckman, Jan. 1880.**W. H. B.*

SOLANUM runcinatum.

Runcinate-leaved Nightshade.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANÆ. *Brown prodr.* 1. p. 443.

SOLANUM. Calyx 5-4-fidus. Corolla rotata, rarò campanulata, 5-4-fida. Antheræ conniventes, apice poro gemino dehiscentes. Bacca subglobosa, 2-(rarò 4-) locularis.

Herbæ v. Frutices inermes v. aculeati. Folia indivisa v. lobata, nunc impari-pinnata. Inflorescentia varia, sæpiùs extra-alaris. *Brown l. c.* 1. p. 444.

S. runcinatum, inerme; foliis pinnatifidis glabriusculis, paniculâ cymosâ, stigmatè clavato, laciniis calycinis ligulatis recurvis, caule herbaceo diffuso. *D. Don Mss.*

Solanum runcinatum. Ruiz et Pavon *Fl. Peruv. et Chil.* 2. p. 36.

S. pinnatum. Cav. *ic.* 5. p. 23. t. 439. f. 1 ?

S. foliis Quernis. Feuill. *Peruv.* 1. p. 722. t. 15.

Planta herbacea, virens, diffusè ramosissima, dumosa, setulis adpressis parcè instructa, asperiuscula. Rami triquetri, e foliorum basibus decurrentibus subalati. Folia alterna, petiolata, profundè sinuato-pinnatifida, substantiâ crassiusculâ subcarnosa, utrinque viridia, sesqui v. tripollicaria: segmentis oblongis, mucronulatis, integerrimis, v. dente uno alterove majori instructis. Petioli breves, alati, basi decurrentes. Flores terminales, paniculati, sæpè prodeunte ramulo laterales. Panicula cymosa, bis v. ter dichotoma, copiosius setulosa. Pedicelli filiformes, scabri, purpurascens. Calyx 5-partitus: segmentis ligulatis, obtusiusculis, subcarnosis, scabris, recurvato-patentibus. Corolla calyce multò major, violacea, rotata, 5-loba, 5-plicata, extùs puberula: lobis semi-ovatis, acutis. Stamina 5: filamenta brevissima, crassa, alba, basi connata! antheræ filamentis longiores, erectæ, conniventes, tetragonæ, valvulis longitudinaliter solutis biforaminiolosæ. Ovarium subrotundum, læve, pallidum, biloculare. Stylus cylindraceus, subattenuatus, basi villosus. Stigma clavatum, subpyramidatum: lobis connatis, margine dilatatis, revolutis, minutè papillosis. Bacca piso communi vix major, sphærica, flava. *D. Don Mss.*

This showy species of *Solanum* is a native of Chile, whence it was introduced last year, from seeds, by Mr. Hugh Cuming; and, although we have noticed the plant in various collections, Mr. Lambert's appears to be the only one in which it

has yet blossomed. It forms a large bush; and, although it thrives luxuriantly enough during the Summer, in the open border, it will, doubtless, require to be treated as a hardy greenhouse plant. We have not remarked whether it becomes shrubby, but we think it probably would, if kept under protection. We are inclined to think this species will prove identical with *S. pinnatum*, of Cavanilles; as we possess specimens, collected in the same locality, by our friend Mr. Caldcleugh. The figure in Feuillée, quoted by Linnæus, under his *S. quercifolium*, accords so entirely with our plant, that we do not hesitate to refer it here. In *S. quercifolium*, of which we have compared the authentic sample in the Linneæan Herbarium, the lobes of the calyx are very shallow, and rounded; but, in other respects, both species are much alike. The latter species, we believe, will be found to be confined to Peru, as the former is to Chile. The Authors of the *Flora Peruviana* appear to have confounded both plants.

Our drawing was derived from a specimen which flowered at Boyton, in October last. The plant succeeds well in common garden earth, and is easily increased by cuttings, or by suckers, which it sends forth in abundance. The name *Solanum* is of doubtful origin; but is derived by some, from *Solari*, to relieve, alluding to the medicinal effects of some of the species, when applied externally. *D. Don Mss.*



1. Calyx. 2. Stamens and Pistil.



Flora of the ...

Flora of the ...

HOMERIA collina.

Copper-coloured Homeria.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ, *Brown prodr.* 1. p. 302.

HOMERIA. *Perianthium* regulare, profundè 6-partitum, petaloideum : *segmentis* subæqualibus, basi foveolâ oblongâ nectariferâ munitis. *Filamenta* connata ! *Antheræ* conniventes, adnatæ. *Stigmata* 3, lamelliformia, conduplicata, bilabiata, trilobâ, apice fimbriato-papillosa. *Capsula* elongata, obtusè prismatica, membranacea. *Semina* subrotunda.

Plantæ (capenses) *humiles, elegantes.* *Rhizoma bulbo-tuber.* *Caulis ramosus.* *Folia linearia, subconduplicata, nervosa.* *Inflorescentia fasciculata, aniformis.* *Spatha bivalvis, submultiflora.* D. Don Mss.

1: *H. collina*, foliis caule duplò longioribus, perianthii segmentis cuneato-oblongis apiculatis glabris basi turbinato-conniventibus, stigmatibus subquadrilobis. D. Don Mss.

Moræa collina. Thunb. diss. 11. n. 13. prodr. 9. Jacq. ic. rar. 2. t. 220. (bona.) Fragm. 14. n. 51.

M. collina β. Ker in Bot. Mag. t. 1033. Irid. gen. p. 34. Dryand. hort. kew. ed. 2. 1. p. 110.

Sisyrinchium collinum. Cav. diss. 6. p. 346. Willd. sp. pl. 3. p. 578. Rœm. et Schult. syst. veg. 1. p. 492.

Rhizoma bulbo-tuber subrotundum, fibroso-induviatum, nucis Avellanæ magnitudine. *Caulis* erectus, ramosus, triqueter, subflexuosus, lævis, plerumque unifolius, spithamæus v. pedalis. *Folia* lineari-elongata, apicem versus valdè attenuata, convoluto-concava, nervoso-striata, viridia, glaucescentia, basi convoluto-vaginata, sesqui v. bipedalia. *Spatha* bivalvis, pluri (2-3)-flora ; *valvulâ alterâ* (exteriori) majori, acuminatâ, arcuè convoluta, viridi. *Flores* speciosi, cupreo-miniati, fugaces, expansione tripollicares. *Perianthium* turbinato-campanulatum, regulare, 6-partitum, petaloideum : *segmentis* cuneato-oblongis, mucronulatis, apice recurvato-patentibus, inferne conniventibus, intus basi maculâ flavâ fulvo-marginatâ ac fossulâ nectariferâ ornatis ; *interioribus* 3 parum angustioribus. *Stamina* 3, monadelphia : *filamenta* pubescentia, in tubum connata, lutea : *antheræ* lineares, aureæ, stigmatum plano applicatæ, longitudine filamentorum. *Ovarium* elongatum, 6-sulcatum. *Stylus* trigonus, inferne parum attenuatus. *Stigmata* ferè omninò *Croci*, 3, lamelliformia, subquadriloba, bilabiata, margine induplicata, apice papilloso-fimbriata. *Capsula* obtusè prismatica, membranacea, trilobularis, polysperma, uncialis. *Semina* subrotunda, fusca. D. Don Mss.

We know of no plants more likely to reward the care of the Florist, than the beautiful family of *Irideæ*, and particularly that portion of them that are natives of Southern Africa, one of which is the elegant species now before us. Although their culture has been, hitherto, much neglected, we hope, ere long, to see them attract that attention which the elegance of their forms, and the beauty and variety of their hues, so justly merit. They are plants of easy culture, and most, if not all of them, will succeed well in the open border, during the Summer months. A mixture of vegetable mould, and river sand, is the soil best suited to them. The present genus was formerly included under *Moræa*, from which it was separated by Ventenat. The chief points of difference between it and the latter, are, the united filaments, and the shorter, narrower, and folded stigmata; characters which appear to us sufficient to keep them apart, especially as they are connected, also, with a peculiarity of habit. Several distinct species appear to have been confounded under the present; but, indeed, the whole genus requires a thorough revision; and as we have not the materials for that purpose, we can only direct the attention of those who have the opportunity to the subject.

Our drawing was taken from a specimen, which flowered at Colvill's Nursery, King's Road, Chelsea. The generic name is derived from *Ομνρεω*, to connect, and refers to the union of the filaments together. *D. Don Mss.*

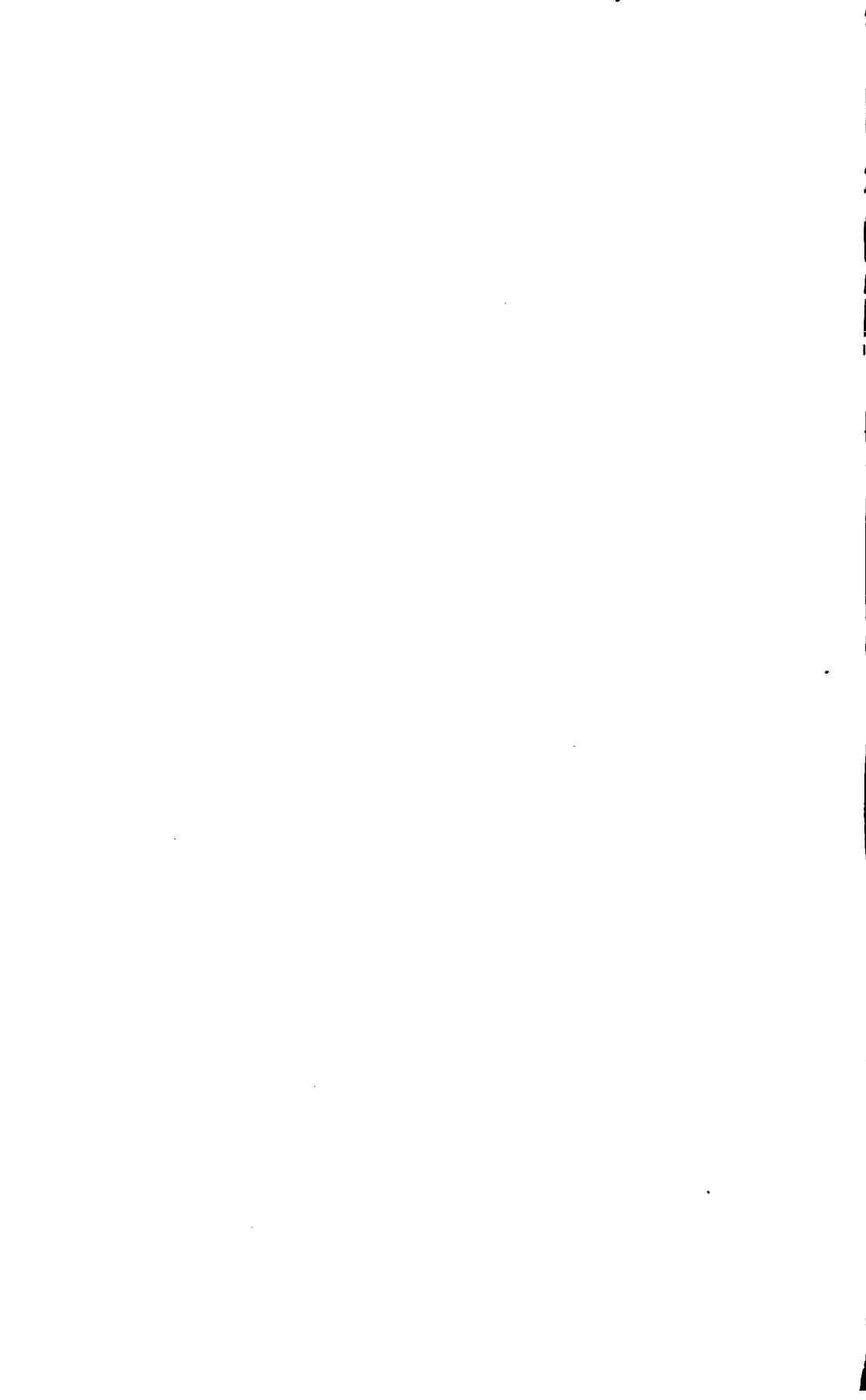


1. Stamens. 2. Style and Stigmata.



E.D. Smith del

Pub. by J. Ridgway Feb. 1833



HERMIONE tereticaulis.

Snowflake-leaved Hermione.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDEE. *Brown prodr.* 1. p. 296.

Div. I. *Radix* bulbosa. *Flores* spæthacei, umbellati, raro solitarii.

Sect. V. NARCISSINÆ. *Suprà fol.* 145. series 2?

HERMIONE. *Suprà fol.* 118. series 2?

Div. ** ROTULIFLORÆ. *Segmentis perianthii rotularibus, coronâ cupulari.* *Flores lutescentes v. ochroleuci.*

H. tereticaulis, umbellâ 5-8-florâ, foliis lineari-loratis carinatis striatis suprà concavis viridescentibus, perianthii segmentis imbricatis ovato-rotundis alternis mucronatis tubo brevioribus, coronâ citrinâ patulâ sublobatâ margine integerrimâ, scapo teretiusculo fistuloso obsoletè striatulo.

Hermione tereticaulis. *Haworth synops. succ. narcis. rev. p.* 140. *Narciss. monog. p.* 14.

Hermione leucoifolia. *Satish. Hort. trans. v.* 1. p. 359.

Narcissus tereticaulis. *Haw. in Linn. trans. v.* 5. p. 245.

Narcissus orientalis (a.) *Ker Bot. Magaz. t.* 1298.

Bulb nearly pear-shaped, rather small in this genus, and so resembling that of the common Citroniere, (not Primo-Citroniere,) as only to be distinguished, when dry, by the best practical gardeners. *Leaves* 4 to 6, linear-lorate, furnished below with a blunt channelled keel, striated on both sides, but mostly so underneath; concave on the upper side, particularly towards the base, becoming gradually less so upwards, flattened near the apex, which is not acute, but somewhat attenuated; of a pale but glossy green, or very slightly glaucescent, some nearly 18 inches long, about three fourths of an inch in breadth near the base. *Scape* hollow, or fistulous, apparently generally about the length of the leaves, very much rounded, particularly at the base, becoming slightly flattened just below the umbel, more on one side than the other. *Spathe* membranous, also striate, terminating in a narrow point, rather longer than the peduncles. *Peduncles* varying in length, from an inch and a half to 2 inches, and even more. *Ovarium* dark green, acutely triangular, 3-celled, 3-valved, with 2 rows of obovate ovules thickly arranged on the 2 septums. *Tube of the*

perianth slender, about an inch long. *Segments* broadly ovate, or rounded, imbricate at the edges, of a cream colour, gradually becoming whitish, or white, and disposed in a circular form, scarcely exceeding half the length of the tube. *Crown* pale yellow, very short and spreading, thrice shorter than the segments, the edge slightly lobed, or, occasionally, almost entire. *Stamens* 6, three inserted in the mouth of the tube, with the anthers more or less exerted: and three inserted a considerable way down the tube: *filaments* short, inserted into the back of the anthers. *Style* smooth, included in the tube, and about half the length of the stamens. *Stigma* 3-lobed: *lobes* rounded, pustulose.

This fine Plant is, I believe, a native of France, and not so common in our gardens as it deserves to be, being perfectly hardy, and flowering freely in any rich deep soil; and when in perfection, is not only much larger than here represented, but is, perhaps, (to use a Florist's phrase,) the most elegant and beautiful *trusser* of the whole. It is annually imported from Holland, with other bulbs, by the name of *Surpassant*, and ranks in the genus at the head of the section *Rotulares*, on account of its roundish stem, and green leaves; thereby more approaching those species which precede it, though, perhaps, not quite so rotular in its flowers as those which follow: for we must ever keep in mind, in sections, as well as genera, and even families, or higher, in the most perfect arrangements of natural productions, that the actual affinity, or approximation, in all groups, is the most complete in the centre, and recedes in the extremities. Thus are we enabled to pass, in the mind's eye, as it were, and without any abruptness in the transit, from the last termination of one group, to the incipient confine of the next, which it most truly approaches. Our drawing was taken from a specimen, sent from the Bristol Nursery.

A. H. H.

The generic name is already explained at fol. 118.



1. A Flower laid open. 2. Pistil.



LOBELIA colorata.

Red-leaved Lobelia.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. CAMPANULACEÆ. *Brown prodr.* 1. p. 559.

Trib. 2. LOBELIACEÆ.

LOBELIA. Suprà fol. 86, series 2.

L. colorata, glabra; foliis lanceolatis acuminatis erosè dentatis, racemo spicato folioso, pedunculis nudis, segmentis calycinis lineari-subulatis margine recurvis.

The whole plant perfectly smooth. *Root* perennial. *Stems* upright, simple, about the thickness of a goose quill, from 4 to 5 feet high. *Leaves* alternate, sessile, lanceolate, acuminate, copiosely and unequally toothed, especially the upper ones, which are also waved at the edges, attenuated towards the base, stained of a deep red, and from 3 to 6 inches long. *Flowers* crowded, in a spiked, leafy raceme. *Peduncles* very short, naked. *Bractes* linear-lanceolate, toothed, twice or thrice longer than the flower-stalks. *Calyx* smooth, 5-partite; the segments linear, rather awl-shaped, pointed, with the edges recurved, and quite entire. *Corolla* smooth, of a deep azure, rather inclining to purple, somewhat longer than the calyx, cleft along the back, the limb bilabiate; lower lip of 3 ovate, slightly pointed, concave lobes, keeled underneath; the upper lip deeply divided into 2 lanceolate, acute, carinate, upright segments. *Stamens* 5, cohering. *Filaments* compressed, blue, fringed at the base. *Anthers* cream-coloured. *Style* filiform, recurved at the top. *Stigma* bilabiate, furnished at the base with a white bearded ring; the lips concave, with a thick, even margin. *Ovarium* 2-celled, half-inferior.

Another showy hybrid *Lobelia*, derived, most probably, from the intermixture of *Lobelia cærulea*, and *cardinalis*. It formed part of a collection of plants received by Mr. Dennis, from North America ; and, although sent as a native species, the imperfect nature of the anthers clearly establishes its spurious origin ; it is, nevertheless, a highly ornamental plant, and is well entitled to a place in the flower border. The stems are tall, straight, and generally unbranched ; occasionally rising to the height of 6 feet, and terminated by a long close spike of blue flowers. A light soil, composed of sandy loam and peat, appears to suit it best ; and the plant may be increased, either by parting the roots, or by cuttings.

Our drawing was taken at the Nursery of Mr. Dennis, Grosvenor Row, Chelsea, in October last.

The generic name is already explained at fol. 86.



1. Calyx and Ovarium. 2. Stamens and Pistil.



CALOPHANES oblongifolia.

Spotted-flowered Calophanes.

Linnean Class and Order. DIDYNAMIA ANGIOSPERMIA.

Natural Order. ACANTHACEÆ. *Brown prodr.* 1. p. 472.

CALOPHANES. *Calyx* profundè 5-partitus, æqualis: *laciniis* subsecteis. *Corolla* infundibuliformis: *fauce* ventricosâ, subcampanulatâ: *limbo* 5-lobo, subæquali. *Stamina* 4, antherifera, inclusa. *Antherarum loculis* parallelis, basi calcaratis. *Stigma* simplex. *Ovarii loculis* dispermis. *Capsula* teretiuscula, sessilis. *Semina* retinaculis subtnsa.

Herbæ (Amer. Boreal.) *perennes*, *caulibus erectis*, *subsimplicibus*. *Flores axillares, solitarii, bibracteati.* D. Don Mss.

C. oblongifolia, foliis spathulatis, corollæ tubo calyce subduplò breviori.
D. Don Mss.

Ruellia oblongifolia. *Mich. fl. amer. bor.* 2. p. 23. *Pursh fl. amer. septr.* 2. p. 420. *Elliott car.* 2. p. 110.

R. biflora. *Linn. sp. pl.* 2. p. 886?

R. minore folio, floribus gemellis. *Dill. elth.* p. 331.

A dwarf, tufted, herbaceous perennial, with numerous simple, slender, obtusely four-cornered stems, scarcely exceeding half a foot in height, and clothed with a soft hoary pubescence. *Root* creeping. *Leaves* opposite, on very short footstalks, perfectly entire, narrowed towards the base, rounded at the apex, green above, paler and hoary beneath; lower ones obovate; the upper ones oblong, or rather spathulate, hardly an inch long. *Flowers* axillary, solitary, on very short peduncles. *Calyx* deeply parted into five, long, slender, subulate, rather bristle-shaped, segments, and furnished at the base with two oblong leafy bractes. *Corolla* rather longer than the calyx, funnel-shaped, ventricose, somewhat campanulate, with five rounded, nearly equal, entire lobes, slightly pubescent, of a pale azure; the lower lobe marked with numerous irregular, purple spots. *Stamens* 4, didynamous, inclosed in the corolla. *Filaments* compressed, fringed, dilated towards the base. *Anthers* erect, oblong, blunt,

2-celled : *cells* parallel, opening lengthways, the base free, and slightly spreading, and furnished with a very short incurved spur. *Connective* narrow, prominent. *Ovarium* oblong, cylindrical, with two ovules in each cell. *Style* slender, filiform, hairy. *Stigma* small, undivided. *Capsule* siliquiform, about half an inch long, 2-celled : *cells* crustaceous. *Dissepiment* parallel, the edge towards the axis, separating longitudinally in the middle, and so much thickened at the end as to fill nearly the whole cell. *Seeds* 2 in each cell, rounded, ovate, mucronulate, covered with a silvery pellicle ; the edges blunt and even. *Retinacula* thick, horny, acute, incurved, shorter than the seed.

This is by far the prettiest of the extratropical *Acanthaceæ*, and is really an interesting addition to our hardy border flowers. It is a dwarf herbaceous perennial, requiring to be planted in a mixture of loam and peat, and is readily increased by parting the roots. It is a native of Carolina, and has been but recently introduced by Mr. Dennis, from whose collection our drawing was taken in August last. The genus is essentially distinguished by having an ovary with two-seeded cells, and the anthers spurred at the base.

We think it probable, that *Ruellia ciliosa*, and *hybrida*, and some other North American species, will be found to belong to this genus ; but our materials do not enable us to settle that point at present.

That this is the *Ruellia biflora* of Linnæus, we cannot take upon ourselves to say, as there is no authentic specimen in his Herbarium, the one under that name being from Jamaica, and a totally different plant.

The name alludes to the showy appearance of the plant, and is compounded of *καλός*, beautiful, and *φαίνω*, to appear. *D. Don Mss.*



1. Calyx. 2. Corolla laid open. 3. Pistil.



BARTONIA albescens.

White-stalked Bartonja.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. LOASEÆ. *Juss. in ann. mus.* 5. p. 18.

Calyx tubulosus, adhærens: limbo 5-partito, persistenti. *Petala* 10, duplici ordine limbo calycino inserta. *Stamina* indefinitè numerosa, calycis limbo inserta: *filamenta* libera; *exterioribus* nunc sterilibus: *antheræ* erectæ, biloculares. *Stylus* 3-7-sulcatus. *Stigmata* 3-7, nunc soluta, inde coalita. *Capsula* 1-locularis, 3-7-valvis, polysperma. *Placentæ* 3-7, lineares, parietales. *Semina* duplici serie creberrima, suborbiculata, compressa, margine membranacea.

Herbæ (plerumque Boreali-Americanæ) erectæ, ramosæ, aculeis minutissimis scabræ, radice annuâ v. bienni. Folia alterna, sessilia, pinnatifida. Flores terminales, solitarii, albi. D. Don Mss.

* *Stamina* pauciora, *filamentis* omnibus dilatatis, *antheris* subrotundis, *stigmatibus* 3 solutis, *capsulâ* placentis 3. Species Australes.

B. albescens, foliis sinuatis, petalis vix calyce longioribus, filamentis omnibus dilatatis, antheris subrotundis muticis, stigmatibus 3 solutis. D. Don Mss.

Bartonia albescens. Gill. & Arnott in *Edinb. geogr. journ.* 2. p. 273.

Root annual. *Stem* upright, branched, cylindrical, leafy, of a grey or ash colour, from a foot to three feet high, occasionally equalling the thickness of one's finger, clothed with short pubescence, intermixed with minute bristly points. *Leaves* alternate, sessile, oblong, obtuse, sinuately pinnatifid, with shallow, broad, obtuse lobes, rough, with very short callous bristles, from an inch and a half to seven inches long, and from half an inch to two inches broad; the upper ones generally acute, and sometimes entire; the base broad and transverse, often slightly clasping the stem. *Flowers* solitary, terminal, of a pale yellow colour; the smallest of the genus. *Calyx* tubular, slightly attenuated at the base, half an inch long, rough with minute bristles; the limb urceolate, with five ovate-lanceolate, attenuated teeth, with their

edges slightly involute. *Petals* 10, lanceolate, mucronulate, scarcely half an inch in length. *Stamens* fewer than in the other species, inserted round the mouth of the calyx. *Filaments* all dilated, linear, channelled, smooth, with a conspicuous midrib; the edges almost membranous. *Anthers* erect, attached by the base, small, round, pointless, composed of two parallel, connate cells, which open longitudinally. *Style* short, 3-sided. *Stigmata* 3, narrow, semicylindrical, obtuse, rarely united. *Capsule* tubular, scarcely an inch in length, apparently 3-valved. *Seeds* numerous, nearly orbicular, compressed, with a membranous border, attached to three linear, parietal placentæ. *D. Don Mss.*

This curious plant, the plainest of a very shewy genus, is another of Mr. Cuming's Chilian novelties, and was raised by Mr. Lambert, from seeds received from that enterprising collector. The specimens, whence our drawing was taken, flowered at Boyton, in the beginning of November. It is a hardy annual; but the plant should be raised in a frame, in order to get it into blossom sufficiently early to perfect its seeds. The species was originally discovered by our indefatigable friend, Dr. Gillies, occupying dry-water courses in the province of Mendoza. The genus is chiefly confined to the western regions of North America, this being the only one yet found in the southern hemisphere; where, with the exception of *Bartonia*, the *Loaseæ* may be said to be peculiar. The present species, it will be seen, constitutes a different section of the genus.

The genus was dedicated by Nuttall, to the late Dr. Benjamin Smith Barton, Professor of Botany in the University of Pennsylvania, Author of some tracts on the Natural History of the United States. *D. Don Mss.*



1. Calyx. 2. Petals. 3. Stamen. 4. Style.

*Flora, 18.**Pub. by J. B. S. & Co., March 1850.**W. J. B. & Co.*

ŒNOTHERA concinna.

Pencilled Tree Primrose.

Linnean Class and Order. OCTANDRIA MONOGYNIA.

Natural Order. ONAGRARIÆ. *Juss. in ann. mus.* 3. p. 315.

Trib. 3. ONAGRÆ. *Dec. prodr.* 3. p. 40.

ŒNOTHERA. *Calycis apice* tubuloso limboque 4-partito deciduis. *Petala* 4. *Stamina* 8. *Stigma* 4-fidum, quandoque lobis connatis indivisum, capitatum. *Capsula* adhærens, 4-locularis, 4-valvis, polysperma. *Semina* angulata, nuda, placentæ centrali, demùm liberæ inserta. *Plantæ* (Americanae) plerumque herbaceæ. *Folia* alterna. *Flores* axillares, solitarii, rarè subpicati, terminales, sæpiùs flavi. *D. Don* Mas.

Œ. concinna, villosa; foliis lanceolatis acuminatis dentatis, petalis bilobis, capsulis arcuatis subteretibus quadricostatis, caule procumbente. *D. Don* Mas.

The whole plant thickly clothed with soft, silky hairs. *Root* apparently annual. *Stems* round, procumbent, much branched, from a span to a foot and a half in length, purplish, woody at the base. *Leaves* sessile, lanceolate, or linear-lanceolate, acuminate, toothed, recurved and spreading, slightly waved, scarcely narrowed at the base, from an inch and a half to two inches long. *Flowers* axillary, solitary, about twice the size of those of *Œ. rosea*. *Tube of the calyx* quadrangular, shorter than the ovarium, of a pale rose-colour. *Segments* lanceolate, pointed, hairy, generally united by pairs, along their whole length. *Petals* 4, obcordate, cloven at the top, rather longer than the calyx, of a pale rose-colour, elegantly pencilled with branching veins, of a deeper tint. *Stamens* 8, the alternate ones shorter. *Filaments* slender, white. *Anthers* yellow, incumbent, mucronulate. *Ovarium* quadrangular, narrow, equal, scarcely half an inch long. *Style* filiform, white, longer than the stamens. *Stigma* white, with 4, oblong, obtuse, spreading lobes, the edges revolute, and the upper surface covered with minute papillæ. *Capsule* nearly cylindrical, with four pro-

minent ribs, curved, about half an inch long, hairy, 4-celled, 4-valved, many-seeded. *Seeds* oblong, angular, smooth and glossy, of a dark brown colour. *D. Don Mss.*

This pretty dwarf species of *Oenothera*, which does not appear to have been noticed by any author, is a native of Chile, and was introduced last year, from seeds collected in that country by Mr. Hugh Cuming. The plant was raised by Mr. Lambert; and it blossomed, for the first time, in September last. It is a hardy annual, of easy culture. The undivided leaves, smaller flowers, and cloven petals, will readily distinguish the species.

The generic name is already explained at fol. 19.

By the inadvertence of the artist, the flowers are erroneously represented as hexandrous, with a five-lobed stigma, in the plate. *D. Don Mss.*



1. Calyx. 2. Six of the Stamens. 3. Style.



LIATRIS odoratissima.

Vanilla-scented Liatris.

Class and Order. SYNGENESIA POLYGAMIA ÆQUALIS.

Natural Order. COMPOSITÆ. *Adans. fam.* 2. p. 103.

Fam. V. EUPATOREÆ. Cass.

LIATRIS. *Involucrum* polyphyllum, imbricatum. *Receptaculum* glabrum, punctatum. *Flosculi* 5 v. 10, infundibuliformes: *limbo* 5-fido, patenti. *Anthera* inclusæ, basi muticæ. *Styli* rami clavati, longissimi, patentés, minutè papilloși. *Achenia* elongato-turbinata, compresso-quadrangula, 10-costata, pilosa, basi attenuata. *Pappi* radiis duplici ordine copiosis, plumosis, v. setaceis, scabris, persistentibus.

Herbæ (Amer. Boreal.) *perennes*. *Folia* *sparsa*. *Inflorescentia terminalis*. *Pappus* sæpè *coloratus*. D. Don *Mss.*

* *Involucris squamis inappendiculatis, pappo setaceo scabro. Herbæ radice fibrosâ, foliis dilatatis, inflorescentiâ paniculatâ. Trilisa.*

L. odoratissima, glabra; foliis caulinis superioribus amplexicaulibus, involucri squamis ligulatis obtusis, capitalis 10-floris. D. Don *Mss.*

Liatris odoratissima. Willd. *sp. pl.* 3. p. 1637. Michx. *fl. amer. bor.* 2. p. 93.

Pursh fl. amer. septtr. 2. p. 510. Elliott *car.* 2. p. 283.

Anonymos odoratissimus. Walt. *fl. car.* p. 198.

Root perennial, fibrous. *Stem* about five feet high, upright, simple, cylindrical, smooth and solid, of a purplish hue, the thickness of a writing quill. *Leaves* thick, coriaceous, smooth and shining, and, like the rest of the plant, copiously besprinkled with minute crystalline dots; *radical ones* spathulate, blunt, entire, or occasionally toothed, from 8 to 9 inches long, and about 3 inches broad; narrowed towards the base, furnished with a stout midrib, which becomes so attenuated, near the top, as to be scarcely distinguishable; *those of the stem* furnished with a few large coarse teeth; lower ones spathulate, resembling the radical ones; upper ones clasping the stem, ovate-oblong, slightly conduplicate, from 2 to 4 inches long, and furnished with 5 nerves. *Panicle* corymbose, large, and spreading. *Capitula* about the size of those of *Stevia purpurea*. *Peduncles* angular, glabrous. *Bractes* ligulate, obtuse, glabrous, adpressed, coriaceous, 3 lines long. *Involucrum* imbricate, polyphyllous; the scales narrow, strap-shaped, obtuse, adpressed; the innermost membranous, and mucronulate. *Receptaculum* flat, glabrous, dotted.

Florets about 10, funnel-shaped, five-toothed, purple, copiously besprinkled with minute crystalline bodies. *Teeth* ovate, mucronulate, naked. *Filaments* compressed, smooth; the upper joint very short and filiform. *Anthers* blackish, inclosed, united into a tube, naked at the base, and crowned by an oval, obtuse, membranous, coloured appendage. *Style* filiform, smooth; the branches narrow, clavate, obtuse, compressed, very long and spreading, twisted, covered with minute papillæ; the stigmatic surfaces, narrow, linear, scarcely prominent, abruptly terminating just below the middle of the branches of the style. *Achenia* turbinate oblong, attenuated at the base, obsoletely four-sided, clothed with short hairs, furrowed, and marked with ten elevated ridges. *Pappus* pale red; the rays copious, unequal, bristly, rough, and persistent, disposed in a double series, and shorter than the corolla. *D. Don Mss.*

A hardy perennial, native of Carolina, and was cultivated by Mr. Lambert about twenty years ago; but the plant had disappeared from the collections, until again introduced, last year, by Mr. Dennis, in whose Nursery, at Grosvenor Row, Chelsea, the plant whence our drawing was taken, flowered in the beginning of November last. It is known in North America, by the name of "Carolina Vanilla Plant," from the delightful fragrance it diffuses, resembling that yielded by a recently cut hay field, abounding in the vernal grass, (*Anthoxanthum odoratum*.) The smell of the dried herb is even more agreeable; and specimens still retain their fragrance after having been kept in the Herbarium for more than twenty years. The plant requires a peat soil, and it should be freely supplied with water, when in a growing state. It is increased by parting the roots. The pappus, whether simple or feathery, is a character of little importance in this genus; and I, therefore, gladly concur with M. Lessing, in retaining it entire. The genus is chiefly distinguished from *Eupatorium*, by the rays of the pappus being disposed in a double series. In *Liatris elegans*, (*Calostelma, nobis*,) however, the rays of the pappus are arranged in a single series only.

The name *Liatris* was employed by Schreber, to denote this genus, but of its signification he makes no mention. *D. Don Mss.*



1. Floret. 2. Stamen. 3. Style. 4. Ovarium. 5. Rays of the pappus magnified.



27 by J. Polakovsky April 1893

LILIUM Catesbæi.

Catesby's Lily.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. LILIACEÆ. Brown prodr. 1. p. 295. in notâ.

LILIUM. Perianthium 6-phyllum, coloratum, deciduum: foliolis basi sulco nectarifero plerumque exaratis. Stylus elongatus. Stigma indivisum. Capsula trigona, 3-locularis, 3-valvis, polysperma. Semina complanata, margine obtusa: testâ spongiosa.

Plantæ (hemisphærii boreal. zonis temperatis propriæ) bulbosæ, bulbis squamatis. Folia nunc verticillata. Flores colore vario, nequaquàm cærulei. D. Don Mss.

L. Catesbæi, foliis sparsis, flore erecto solitario, perianthii foliolis lanceolatis acuminatis undulatis: unguibus angustatis laminâ dimidio brevioribus. D. Don Mss.

Lilium Catesbæi. Walt. car. p. 123. Willd. sp. pl. 2. p. 86. Mich. fl. bor. amer. 1. p. 197. Bot. Mag. t. 259. Dryander in hort. kew. 2. p. 241. Pursh fl. amer. septr. 1. p. 228.

L. carolinianum. Lam. encycl. 3. p. 554.

L. spectabile. Salisb. ic. rar. t. 5.

L. carolinianum, flore croceo punctato, petalis longioribus et angustioribus. Catesb. car. 2. t. 58.

Bulb round, rather larger than a walnut. *Stem* upright, simple, round, smooth, purplish, seldom exceeding a foot and a half in height. *Leaves* alternate, lanceolate, or linear-lanceolate, acute, an inch or two in length, smooth, and even, sometimes, but rarely, verticillate. *Flowers* erect, solitary, campanulate, large, and showy. *Leaves of the perianthium* rather open and spreading, lanceolate, or ovate-lanceolate, acuminate, smooth and naked, wavy at the margin, the points recurved; the colour of an orange scarlet, with a large, round, yellow blotch, marked with several orbicular, dark brown spots at the base of each lamina; the underside of a dull yellow. *Claws* narrow, linear, incurved, greenish, about half the length of the lamina; the alternate ones compressed. *Stamens* 6, nearly equal, shorter than the perian-

thium. *Filaments* slender, smooth, connivent towards the base. *Ovarium* 3-sided, pale green. *Style* rather longer than the stamens, 3-sided, smooth. *Stigma* large, clavate, dark red, papillose, with three prominent angles.

Although introduced in 1787, this very elegant Lily is still rare in collections, the roots increasing very sparingly, and the seeds being seldom perfected in this climate. A native of Virginia and Carolina, in low, open, mossy swamps. It is quite hardy, produces its brilliant blossoms in June, and thrives best in a peat soil.

Our drawing was derived from Mr. Dennis's Nursery, Grosvenor Row, Chelsea; where we have remarked a smaller variety, with much narrower leaves, and the segments of the perianthium more attenuated towards the base. *D. Don Mss.*



1. Unexpanded flower. 2. Stamen. 3. Pistil.





HELLÉBORUS niger var. vernalis.

Vernal Black Hellebore.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen. p.* 281.

HELLEBORUS. *Suprà fol.* 109. *Series 1.*

- H. niger*, foliis pedatisectis glabris, scapo subnudo unifloro.
Helleborus niger. *Linn. sp. pl. p.* 783. *Blackw. herb. t.* 506. 507. *Mill. dict. no. 2. Jacq. austr. t.* 201. *Lam. dict. 3. p.* 97. *Curt. bot. mag. t.* 8. *Bull. herb. t.* 33. *Willd. sp. pl. 2. p.* 1336. *Dec. ft. fran. ed. 3. 4. p.* 908. *Woodv. med. bot. 1. p.* 50. *t.* 18.
H. grandiflorus. *Salisb. prodr. p.* 374. *Linn. Trans. 8. p.* 304.
H. niger legitimus. *Clus. hist. 1. p.* 274. *Besl. hort. cyst. t. 1. fol.* 1.
H. niger verus. *Ger. herb.* 976.
H. niger, flore roseo. *Bauh. pin.* 186.
H. niger, foliis angustioribus. *Tourn. inst.* 272.
Helleborum nigrum. *Math. comm. p.* 843.
Veratrum nigrum. *Dod. pempt.* 385.
β. vernalis, foliorum segmentis cuneatis obtusiusculis pallidè viridibus margine revolutis crebriùs serratis: dentibus obtusiusculis mucronulatisque, floribus majoribus.

Rather more dwarf and compact than the common variety. *Scapes* from 3 to 6 inches high, stout, round, or slightly compressed, mostly simple and one-flowered, but occasionally forked, about the thickness of a goose quill, smooth and glossy, marked with numerous irregular purple spots. *Leaves* tripartite, and septenately digitate: *segments* cuneate, lanceolate, blunt and mucronulate, coriaceous, yellowish green above, and marked with depressed, channelled veins, 2 to 5 inches long, paler beneath; the edges revolute, serrated from about the middle upwards, with broad, unequal, rounded, mucronulate, approximate teeth; the lateral ones connate; the middle one separate and distinct, with equal sides. *Foot-stalks* short, stout, and rounded, about 2 inches long, marked along the upper side with a shallow furrow. *Bractes* 2, ovate, membranous, mucronulate, or notched, wavy, pale

green, slightly tinged with purple. *Flower* large, terminal, about 3 inches across. *Calyx* of 5, large, obovate leaves, pure white, afterwards changing to a pale rose or purple, greenish yellow at the base, and traversed by numerous nerves. *Petals* funnel-shaped, pedicellate, pale green, with an obliquely truncate mouth, the edge revolute, yellow, slightly lobed and crenated, somewhat exceeding half the length of the stamens, and about twice the length of the slender white foot-stalk. *Stamens* apparently arranged, on the thick torus, in spiral lines: *filaments* cylindrical, white: *anthers* yellow, adnate, oblong, obtuse, opening longitudinally. *Pistils* about 6 or 7: *ovaria* compressed, keeled, united together at the base into a short thick column: *styles* slightly recurved, white, afterwards changing to a pale purple: *stigma* a small, abrupt, papillose dot.

Of the three varieties of the Christmas Rose, which we have observed in the gardens, the one now figured is, we think, entitled to the preference, as being less encumbered by foliage, and having the blossoms at least a third larger, and of a clearer colour. It flowers six weeks or two months later than the common kind. These varieties differ in their size, time of flowering, and in the form of the segments of their leaves, but they agree in the more essential parts of their structure. A botanist should be wary of making species out of long-cultivated plants; for they, like domestic animals, are much more prone to vary, than those in a wild state.

The leaf of the present variety is, probably, what Jacquin has represented separately, in the plate of the *Flora Austriaca*, above referred to.

Our drawing was taken at the Botanic Garden, Chelsea, in February.

The name is already explained at fol. 109, of the first series. *D. Don Mss.*



1. Petal.



Iris sibirica L. (1843) *Illustr. by J. H. R. S. (1843)*

IRIS biglumis.

Glumaceous Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

IRIS. Suprà fol. 11 et 56. Series 2.

I. biglumis, imberbis; scapo subbifloro foliis breviori, spathâ diphyllâ subglumaceâ, perianthii laciniis subæqualibus, stigmatibus inciso-serratis, capsulis hexagonis. *D. Don Mss.*

Iris biglumis. *Vahlenum.* 1. p. 149.

I. an spuria? *Pall. it.* 3. *append.* p. 26. *t. c. f.* 1.

Root creeping. *Scape* round, about 3 inches high, entirely enclosed by a pair of leaves, from the bosom of which it issues. *Leaves* narrow, ensiform, acuminate, erect, rather stiff, and harsh to the touch, of a dull glaucous green, dark red at the base, exceeding the scape, and lengthening considerably after the flowering season. *Spathe* composed of two broad, ovate-oblong, acute, membranous, green, adpressed, nearly equal leaves; their edges scariose, and over-lapping each other towards the base. *Flowers* mostly 2, sessile, of a pale blue; the segments about equal in size and form, narrow, rather spathulate than lanceolate; the outer 3 reflexed, rather broader and paler than the inner ones, which are erect, but hardly connivent; the disk of a whitish colour, marked with numerous purple veins and spots. *Stigmas* linear, cloven, deeply and sharply serrated, of a deeper shade of blue. *Ovary* about an inch long, marked with 6 furrows; the alternate ones rather deeper.

Very nearly related to *I. spuria*, but apparently distinct from all the varieties of that species by its shorter stem, broader and glumaceous bractes, and nearly equal segments of its flowers. A native of Siberia, where it was discovered by the celebrated Pallas, who has given a figure and description of the plant in his valuable travels. Our figure will

be found to differ in some respects from his; but we have no doubt of the identity of the two plants.

Introduced by Mr. Anderson, from seed communicated by Dr. Fischer.

Our drawing was taken at the Botanical Garden, Chelsea, in the early part of last Summer. It is found to thrive in a light soil.

The generic name is explained at fol. 11. *D. Don Mss.*



1. Stamens. 2. Stigmas.



NARCISSUS recurvus.

Drooping-leaved Narcissus.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo V. NARCISSINÆ. *Haw. Monogr.* p. 1.

NARCISSUS. *Spatha* 1-3-flora. *Corona* parva, patellaris, corollæ sæpius nivæ laciniis multoties brevior, tota crocea seu flava, et margine croceo plerumque ornata. *Stamina* tubo adnata; 3 inferiora parùm inclusa; 3 superiora antheris semi-exsertis. *Haw. l. c.* p. 20.

N. recurvus, uniflorus; foliis semunciam latis perglaucis superne debilitè recurvo-dependentibus scapo humilioribus, corollæ nivæ laciniis imbricatis latè ovatis retusis cum mucrone lateribus inflexis, coronâ præplicatâ : ore crenulato croceo. *Nobis narciss. revis.* p. 151. *l. c.* p. 15.

The annexed figure represents one of the largest and latest flowering species of our restricted genus *Narcissus*, which is only surpassed in size and beauty by *N. patellaris*, of Salisbury, and our *N. Poëtarum*; and which last is the finest of all this fair and fragrant group.

All the species are probably indigenous to the southern countries of Europe, although two of them have been said to occur spontaneously in England. They are all perfectly hardy bulbous-rooted plants, and produce their flowers in April and May; the one here delineated, being nearly, or quite the latest of all, except the double flowered varieties; whose blossoms, in cool moist seasons, endure to the very end of May, even in the neighbourhood of London. They are to be increased abundantly by offsets in any soil or situation, but will not thrive well, and scarcely flower at all, in a poor, dry, or light one. But when seasonably transplanted every third year into deep, rich, and rather moist, or strong loamy soil, they will bloom very freely, and very perfectly; and are, when so treated, the most worthy of cultivation of the Narcissinean family; except alone, perhaps, the very delicately perfumed Jonquills; and even these, in size and beautiful colours, they very far surpass.

In poor, or very dry soils, the flowers of these fine plants, and more especially the double ones, are subject to

a very remarkable disease, which attacks them about the time they ought to escape from their membranous, and, finally, scariose spathes, and prevents their being able to burst those filmy envelopes in the usual healthy manner. The blossoms appear to stagnate and die, imprisoned within them, at about one-third, or, occasionally, one half of their natural size; at which time the spathes seem somewhat puffed, or more inflated, than when in a healthy state; and if pressed by the fingers, burst, and give out the imprisoned, and, perhaps, unwholesome air; discovering the discoloured, and only partially developed flower, as if it had been scalded by the heat of the sun's rays. This distemper the gardeners have a name for, and say, such flowers are *blind*. Now, as this defect occurs much less frequently in *moist* than in *dry* seasons, it is probably occasioned by the sun's over-heating the air in the spathe, and exhausting the sap of the plants quicker than the roots in dry soils can supply it; and thus, as it were, scalding the nascent blossoms, before they have time to accomplish their full development, and escape from the unhealthy air* of the swollen and indurated spathe. Wherefore, it should seem, that poverty, and consequent want of vigour, is the predisposing, and at length efficient cause of this disease; and, if so, the remedy will doubtless be that of planting the flowering roots three or four inches deep over their crowns, in a strong, rich, and rather moist loamy soil, and, probably, in a somewhat shady situation, but not overhung by other plants; and, in dry weather, watering the plants after the setting of the sun, but not much after the blossoms are expanded.

There is a variety, (*Narciss. Monog. l. c.*), with slenderer, greener, and often less conspicuously drooping leaves, than the one we have here chosen to figure; but it has little other difference. Both are those snowy Narcissi, with crimson bordered cups, which adorn so abundantly the flower markets of London in May; and those which ornament them in April, though rather smaller, but quite of equal beauty, belong to *Narcissus ornatus* of our *Monograph*, p. 20, which is distinguished well from *N. recurvus*, by its flattened crown; as the latter is, from all others, by its drooping leaves, and broad but laterally inflected somewhat hollow petals.

A. H. H.

* I have let out this air with the point of a pin, in many stages of growth; but this process afforded neither advantage nor relief.



1. A flower spread open, to show the insertion of the stamens.
2. Pistil.

*Thart del.*

Sub. In. J. Richardson, May 22/13.

5000

IRIS reticulata.

Netted Iris.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

IRIS. *Suprà fol.* 11. et 56. series 2.

I. reticulata, imberbis; perianthii segmentis interioribus lanceolato-spathulatis erectis elongatis, stigmatibus obtusis bilobis, foliis tetragonis, radice bulbosâ. *D. Don Mus.*

Iris reticulata. *Marsch. à Bieb. fl. taur. cauc.* 1. p. 34. *Cent. plant. rar. ross.* 1. t. 11. *Rœm. et Schult. syst.* 1. p. 480.

Root an ovate bulbous tuber, covered with several reticulated brown coats. *Leaves* issuing from a double spathaceous, pointed, keeled, membranous, unequal sheath, long, slender, hollow, tetragonal, glaucous, copiously furnished with minute, white dots, terminated by a white point, from a span to a foot or more in length; the sides concave, smooth, with a conspicuous nerve, and blunt angles. *Flowers* solitary, purple. *Peduncle* scarcely an inch long, 3-sided, compressed. *Spathe* composed of two, unequal, linear, mucronate, keeled, cartilaginous, nerved valves; the edges scarious, and convolute; the inner one smaller, obvolute, inclosed. *Perianthium*, the tube slender, obtusely 3-sided; about an inch and a half long, greenish white, and furrowed, the angles marked with a blue line: *outer segments* oblong, rather cuneiform, spreading, concave, with a stout greenish midrib, the ground of a pale purple, marked with deeper coloured veins, apex recurved, and slightly mucronulate, of a deep violet, rather inclining to blue towards the centre, which is furnished with an oblong orange spot, marked with violet dots; 3 *inner ones* erect, longer, lanceolate, or somewhat spathulate, bluntish, slightly waved, narrowed towards the base, of a uniform purple. *Ovarium* with 3 blunt angles, each furnished with an elevated ridge. *Stigmata* oblong,

about as long and rather broader than the outer segments of the perianthium, and of the same uniform purple colour as the inner segments; the upper lip of two rounded, finely serrated, recurved lobes; the lower one very short, and almost obsolete.

We are indebted to Messrs. Whitley, Brames, and Milne, of the Fulham Nurseries, for the opportunity of publishing a figure of this rare and beautiful *Iris*, which had been received by them from M. Hartwiss, Director of the Imperial Gardens, at Nikita, in the Crimea. It appears to have been first introduced to our gardens in 1821, but the plant was afterwards lost; and, we believe, it exists at present in no other collection than the one abovementioned, where it blossomed early in March last.

This remarkable species agrees with *Iris tuberosa* in its leaves, but the flower is very different, more resembling that of the normal group of the genus; and we know of no species with which it can well be compared; but in any arrangement it must be placed near to *Iris Xiphium*, and *Xiphioides*, to whom it approaches in habit, and in its bulbiform roots. The species was originally discovered in Georgia by M. Adams, from whom the learned author of the *Flora Taurico-Caucasica* received it.

The plant requires a light rich soil, and the shelter of a pit or frame in Winter. It is increased by offsets, and by seeds, which may be made to perfect, if the season is favourable, and care is taken to protect the plant from the wet, and to admit a free circulation of air when it is in flower.

D. Don Mss.

The generic name is already explained at fol. 11, and 56, of the present series.



1. Section of a leaf. 2. Outer segment of the Perianthium, with a Stamen and Stigma.

HELLEBORUS lividus.

Three-leaved Hellebore.

Linnean Class and Order. POLYANDRIA POLYGYNIA.

Natural Order. RANUNCULACEÆ. *Juss. gen.* p. 231.

Tribus IV. HELLEBOREÆ. *Dec. syst.* 1. p. 306.

HELLEBORUS. Suprà fol. 109. series 1.

H. lividus, foliis trisectis glabris: segmentis ellipticis: paginis discoloribus, petalis longitudinaliter fissis: ore integro, caule folioso multifloro.
D. Don Mss.

Helleborus lividus. *Solander in Ait. kew. ed.* 1. 2. p. 272. *Bot. mag.* t. 72.
Willd. sp. pl. p. 1338. *Salisb. in linn. trans.* 8. p. 304. *Dec. fl. fr.*
ed. 3. 4. p. 907. *EjUSD. syst.* 1. p. 321. *prodr.* 1. p. 47.

H. trifolius. *Mill. dict. n.* 4. non *Lin.*

H. triphyllus. *Lam. dict.* 3. p. 97.

H. foetidus var. *β.* *Lin. sp. pl.* p. 784.

H. niger trifolius. *Ald. h. farn.* 93. t. 92. *Moris. hist.* 3. p. 460. s. 12.
t. 4. f. 7. *Tourn. inst.* p. 272.

Helleboraster indicus trifolius. *Barr. ic.* 1143.

Stem upright, branched, generally twice forked, leafy, slightly angular and purplish, about seven inches high. *Leaves* ternately parted, the segments elliptical, pointed, minutely and sharply toothed, or sometimes entire, stiff and coriaceous, perfectly smooth, of a dull rather glaucous green above, marked with whitish veins, underneath of a livid purple, an inch and a half to three inches long, and from half an inch to an inch in breadth, intermediate one on a short stalk; the lateral ones quite sessile, with unequal sides. *Foot-stalks* an inch long, nearly round, stiff, of a purple hue, marked above with a shallow furrow, the base broad, concave, and clasping the stem. *Peduncles* angular, an inch long. *Bractes* half embracing the stem, ovate-oblong, mucronulate, the edges furnished with numerous small sharp teeth. *Calycine leaves* 5, elliptical, serrated at the apex, somewhat coriaceous, green, afterwards assuming a purplish hue; the outer 3 smaller, and pointed. *Petals* 11, small, unequal, tubular,

white, cleft almost to the base on the inner side, the apex truncate and quite entire, scarcely exceeding the footstalk in length. *Stamens* numerous, white, inserted in spiral lines on a conical torus. *Filaments* slender, white. *Anthems* roundish, compressed, 2-celled, the cells connate, and opening lengthways. *Pistils* 8. *Ovaria* compressed, keeled. *Styles* awl-shaped, recurved, purplish, marked along the inner surface with a shallow furrow. *Stigma* a small papillose point.

This is a very old inhabitant of the gardens, having been cultivated in the Farnese Gardens in 1625, and introduced to this country prior to the year 1710; but it is still however rare in collections. By Linnæus it was regarded as only a variety of *H. fatidus*; and from its seldom or ever producing seeds in a cultivated state, I was led to suspect the plant might be of hybrid origin; but the discovery of its native country, which had remained long unknown, has dispelled these conjectures, and fully established its claims to specific distinction, being, perhaps, the most remarkable of the whole genus. It now turns out to be a native of Corsica, where it was found by Labillardière. The plant is rather too tender to be trusted out in the open border during Winter; and being extremely shy to cultivate, it is always better to keep it under the protection of a frame. It should be planted in a sandy loam, and is increased by suckers, which however are produced but sparingly.

Our drawing was taken from a plant which flowered in the Botanic Garden at Chelsea, in February last. *D. Don Mss.*

The generic name is already explained at fol. 109, of the first series.



1 and 2. Petals. 3. Torus with a single Stamen, and crowned by the Pistils.



HERMIONE aperticorona.

Spreading Orange-crowned Hermione.

Linnean Class and Order. HEXANDRIA MONOGYNIA.

Natural Order. AMARYLLIDÆ. *Brown prodr.* 1. p. 296.

Subordo V. NARCISSINÆ. *Haw. Monogr.* p. 1.

HERMIONE. Suprà fol. 118. series 2.

H. aperticorona, subsexiflora; corollæ laciniis subrotundo-ovalibus semi-reflexis valdè imbricatis tubo brevioribus flavis coronâ patulâ plicatim subrepandâ aurantiacâ sesquiduplò longioribus. *Nobis l. c.* p. 9.

This beautiful species of *Hermione*, comes into flower very soon after the more common *H. cupularis*, (the *Soleil D'or* of the gardens;) and although a smaller and paler flowered plant than that lofty species, its individual blossoms are sometimes larger, and, perhaps, more elegant and graceful.

The bulbous root, although I have cultivated the plant more than twenty years, I never saw half the size of a man's fist, which that of the *Soleil D'or* is said often to surpass. The *leaves* are 3 or 4 in number, strap-shaped, erect, shorter than the flower-stalk at the time of blooming, perhaps, flatter than usual among its nearest affinities, and likewise more blunt pointed; of a glaucescent colour, or often nearly deep green, and slightly striated longitudinally; of the width in flowering plants of ten lines, but in younger plants far less. The *scape*, or *flower-stem*, is somewhat cylindraceous, less compressed, of the colour of, and striated like the leaves, and rises to the height of about 12 or 14 inches, which is little more than half that of the *Soleil D'or*. The *spathe*, or sheath which contains the flowers, is of a dark or brownish colour, and of a membranaceous or filmy texture, and becomes, finally, dry parched and scariose. The *flowers* appear in the middle of April, very soon after those of *H. cupularis*; they are in well-grown plants about 6 in number, forming an elegant umbel, and their 6 segments

are often semi-reflexed, of a broad oval form, and much imbricated; of a rich yellow colour, often shorter than their *tube*. The *crown* is ample (amongst its nearest affinities) and saucer-shaped, that being much more spreading upwards than in *Soleil D'or*; somewhat plaited and crenulate at the mouth, and nearly three times shorter than the *segments*, and of a bright orange colour. Three of the orange *anthers* are included within the *tube*, and three are more or less completely excluded beyond it. *Stigma* enclosed with 3 short lobes.

The *Hermione aperticorona*, being so nearly related to *H. cupularis*, as above shown, is probably a native, like that plant, of the northern coast of Africa, or of the Levant.

The greater part of this genus requires some slight protection in Winter, or the tops of their leaves will be killed by the frost, which greatly weakens their roots, often destroys their flower buds in early infancy, and sometimes paralyzes, or even kills the plant. They thrive best in a rich loamy manured soil of 2 feet deep, and in a warm situation. The crowns of their bulbs should be covered to the depth of 2, 3, or 4 inches, according to their size; and transplanting them, when quiescent in July, or August, once every two or three years, carefully removing every offset from the flowering bulbs. If it should happen to be convenient, they may be kept out of the ground in any dry situation, like Tulips, but not exposed to much light, until the middle or end of November, but not longer with impunity, and be then planted at least six inches from each other, if of the flowering size: but all offsets, at less distances, according to their respective sizes, and soon after they are taken up: for if kept out of the ground they shrivel, and dry in their outer coats, and become invariably weakened and deteriorated. A. H. H.



1. The Corolla laid open, to shew the insertion of the Stamina. 2. Pistil.



LOÀSA álba.

White-flowered Loasa.

Linnean Class and Order. POLYANDRIA MONOGYNIA.

Natural Order. LOASEÆ. *Juss. in ann. mus.* 5. p. 18.

LOASA. *Calycis limbo* 5-partito, persistenti. *Petala* 10; *interiora* 5 (stamina mutata,) dissimilia, involuta, conniventia, biappendiculata apice lobata. *Stamina fertilia* numerosa, in 5 phalangibus collocata; *sterilia* 10, per paria petalis interioribus adnata, connectivo longè producto, filiformi. *Antheræ* subrotundæ, erectæ, biloculares. *Stigma* sæpius indivisum. *Capsula* turbinata, 1-locularis, 3-valvis, polysperma. *Semina* subrotunda, reticulata, placentis 6 geminatim contiguis inserta.

Herbæ (Americæ australis) *annuæ*, *pilis setaceis*, *prurientibus sæpè vestitæ*. *Folia petiolata, opposita v. alterna, plerumque lobata.* *Flores solitarii, pedunculati.* *D. Don. Mss.*

L. alba, canescens, hispida; foliis oppositis palmatis dentatis, laciniis calycinis lineari-elongatis, petalis saccatis: appendicibus exteriorum dolabratis aristatis. *D. Don Mss.*

The whole plant clothed with minute hoary pubescence, intermixed with prurient bristly hairs. *Root* annual. *Stem* branched, spreading, about a foot high, round. *Leaves* opposite, cordate, palmate, with from 5 to 7 lanceolate, acute, toothed lobes; lower ones stalked; upper ones sessile, with rather narrower, and mostly entire lobes. *Flowers* axillary and terminal, mostly solitary, nodding. *Peduncles* filiform, about twice the length of the leaves. *Calyx* with 5 deeply parted, linear, or linear-lanceolate, acute, entire segments. *Petals* 10; the outer 5, large and spreading, hollow, saccate, unguiculate, inclosing the bundles of stamens, shorter than the calycine segments, and of a pure white colour; inner 5, obcuneately oblong, hollow, cloven at the top, involute at the margins, of a deep red, especially towards the base, and furnished with two small dolabriform bristle-pointed appendages, of the same colour. *Stamens*, the fertile ones very numerous, arranged in five bundles opposite the outer petals,

with slender capillary filaments; sterile ones 10, attached by pairs to the inner petals; the filaments dilated and membranous towards the base, with the connective prolonged and filiform, bearing at its base a single imperfect cell of an anther. *Anthers* small, round, bilocular, yellow. *Ovarium* turbinate, hispid, 1-celled, with numerous ovula attached to 3 pair of prominent placentæ. *Style* filiform, hairy, attenuated and smooth towards the top. *Stigma* undivided.

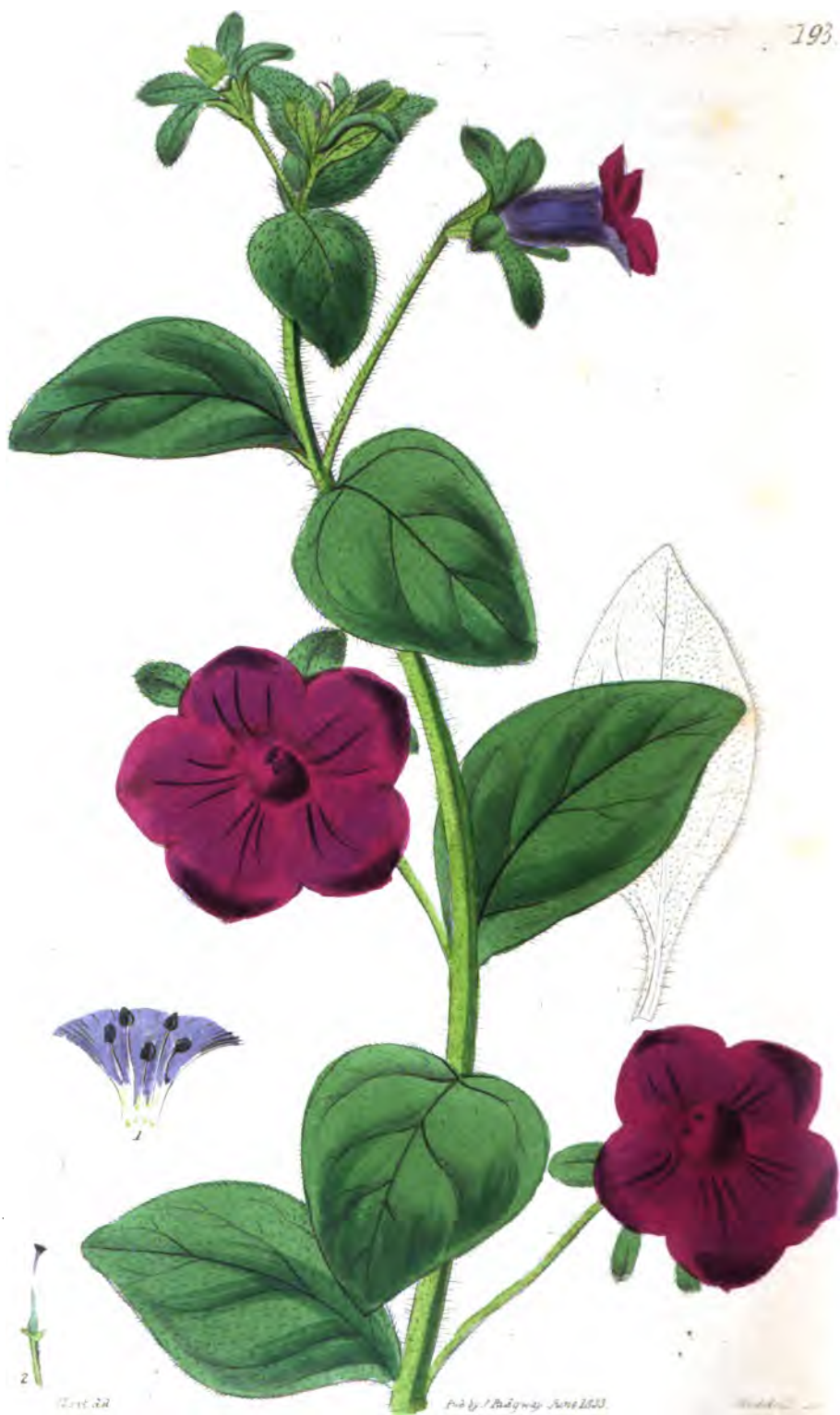
This pretty species of *Loasa*, was introduced last year, from seeds collected in Chile, by Mr. Hugh Cuming; and our drawing was taken from a specimen, communicated by Sir George Staunton, Bart., in whose collection, at Leigh Park, Hants, the plant blossomed in June last. We do not find it recorded in any work, nor does it appear to be included among the new species described by Dr. Hooker, and Mr. Arnott, in the *Botanical Miscellany*.

The plant is annual, and is increased by seeds. It is of easy culture, and will be found to thrive luxuriantly in the open border, during the Summer, continuing to send forth its showy blossoms for several months in succession.

The name was altered by Linnæus, from *Loosa*, an appellation of no meaning, applied to the genus, by Adanson. *D. Don Mss.*



1 Calyx. 2. Outer Petal. 3. Inner Petal. 4. Two of the sterile Stamens. 5. Style.



NIEREMBERGIA phœnicea.*Purple Nierembergia.**Linnean Class and Order.* PENTANDRIA MONOGYNIA.*Natural Order.* SOLANEÆ. *Brown prodr.* 1. p. 443.*NIEREMBERGIA.* Suprà fol. 172. series 2.*Sect. 2. Corollæ fauce dilatatâ sæpiùs ventricosâ, staminibus inæqualibus tubo medio insertis subinclusis, stigmatè subcapitato.* Petunia.*N. phœnicea, foliis ovatis, laciniis calycinis lineari-spathulatis, corollæ fauce campanulatâ tubo triplò longiori, caule ramoso diffuso. D. Don Mss.**Salpiglossis integrifolia. Hook. in bot. mag. t. 3113.*

The whole herb of rather a lively green, clothed with soft, jointed, spreading hairs, each of which is terminated by a small gland. *Root* fibrous, apparently annual. *Stems* round, branched, spreading, from a foot to three feet high. *Leaves* alternate, ovate, somewhat acute, and slightly mucronulate, quite entire, soft to the touch, narrowed at the base, marked underneath with several pair of curved ribs, and above with depressed lines; about two inches long; lower ones on a short footstalk; uppermost sessile, and occasionally opposite. *Flowers* large, showy, more resembling those of a *Convolvulus*, than a plant of this family; solitary, stalked, drooping, not axillary, but arising from the side of the branches, and oftentimes seated opposite the leaves. *Peduncles* filiform, villous, clothed with soft hairs, an inch and a half to two inches long. *Calyx* deeply parted into five strap-shaped, or spathulate, leafy, obsoletely mucronulate, unequal, spreading, rather recurved segments; two outer ones larger; the tube very short, turbinate, with 10 ribs. *Corolla* of a bright purple, thrice longer than the calyx, slightly marked with five angles; throat dilated, campanulate, nerved, and reticulately veined, about thrice longer than the tube; the limb large, spreading, plaited, about an inch and a half across, with five rounded, obsoletely mucronulate lobes. *Stamens* 5, unequal, inclosed, inserted in the mouth

of the tube ; two upper ones rather longer. *Filaments* compressed, smooth, purple, with their bases closely attached to the tube of the corolla ; the fifth the shortest, and placed between the longer pair of stamina, occasionally sterile, and sometimes even dilated and petaliform. *Anthers* dark purple, bilocular ; the cells distinct, divergent at the base, attached at the middle by means of a narrow connectivum. *Pollen* violet. *Pistil* shorter than the stamens. *Ovarium* ovate, bilocular, furnished at the base with two elevated yellow glands, arising from the shallow disk. *Style* compressed, smooth, with four obsolete angles, becoming broader towards the top. *Stigma* somewhat capitate, with two very short, spreading, viscid lobes, separated by a shallow furrow.

Few plants of this family surpass the one now before us in the beauty and brilliancy of its blossoms, rendering it one of the most valuable acquisitions that has been made to our collections of late years. The flowers are so like those of a *Convolvulus*, that, at first sight, one would be apt to take it for a species of that genus.

It is a native of the countries of the Rio de la Plata, but is found to succeed uncommonly well in the open border in this country, where it will continue to blossom from April to November, if the weather is mild. Treated as a greenhouse plant, it will endure for several years, as we have had already occasion to remark of many other annual species of this family. It is readily increased both by seeds and cuttings ; but young plants raised by the former mode are to be preferred, the blossoms in them being in general much larger, as in our specimen, which was derived from a seedling plant, communicated by Mr. Neill to Mr. Lambert, and which flowered at Boyton last month.

Our thanks are due to Messrs. Young, of the Epsom Nurseries, for the opportunity of examining a magnificent plant of this species.

I have already, at fol. 172, entered fully into the reasons which have led me to unite *Nierembergia* and *Petunia* ; and every subsequent examination has tended to confirm the accuracy of the views there expressed. *D. Don Mss.*



1. Tube of the Corolla laid open, to show the insertion of the stamens.
2. Pistil.



Iris sibirica L.

Iris sibirica L.

Iris sibirica L.

CROCUS lacteus.

Cream-coloured Crocus.

Linnean Class and Order. TRIANDRIA MONOGYNIA.

Natural Order. IRIDEÆ. *Brown prodr.* 1. p. 302.

CROCUS. Suprà fol. 98. series 2.

* Sect. I. VERNALES.

† Sub-sect. II. Depilati. *Corollæ fauce depilatâ.*

C. lacteus; floribus unibracteatis e sulphureo-albicantibus basi laciniarum (præcipuè intùs) stigmatibusque pallidè flavicantibus, filamentis incurvato-patentibus puberulis supernè geniculatis; antheris flavissimis. *Nob. in Mss. per multos annos.*

Crocus lacteus. *Sabine in hort. trans. v. 7. p. 432, &c. cum icone.*

Crocus lagenæflorus. β. *Salisb. parad. lond. t. 106.*

Crocus mæsiacus. β. *Gawler in bot. magaz. t. 1001. (synonymis confusis.)*

Crocus lagenæflorus. β. *Nob. in hort. trans. v. 1. p. 134.*

Crocus albus major alter, dictus mæsiacus. *Park parad. p. 161. tab. 163. fig. 2.*

Crocus vernus minor albicans. *Mill. dict. ed. 6; nec Bauh.*

Crocus vernus var. 11. Narrow-leaved Spring Crocus, with a small white flower. *Mill. dict. ed. 7. Ed. 8. No. 12.*

Crocus vernus mæsiacus, flore albo. *Theatr. fl. t. 39.*

Crocus vernus latifolius pallidus. *Bauh. pin. p. 66. No. 3.*

Crocus mæsiacus. *Ker irid. p. 76. exclus. synonym. Willd.*

Crocus mæsiacus. *Hort. kew. ed. 2. p. 81. (synonymis confusis.)*

β. Gracilior, laciniis minùs imbricatis albis; interioribus basin versus ad costam flavicantibus, exterioribus a basi ferè ad medium tuboque lætissimè prasino-cæruleove-striatulis; filamentis minùs pubescentibus. *Nob. in Mss.*

Crocus lacteus, var penicillatus. *Sabine in hort. trans. v. 7. p. 447, &c. cum icone.*

Crocus lagenæflorus. α. *Salisb. par. lond. t. 106.*

Crocus lagenæflorus. γ. *Nob. in hort. trans. v. 1. p. 134.*

Crocus vernus, flore albo purpureo-violaceo basi. *Mill. dict. ed. 6?*

Crocus albus mæsiacus, fundo violaceo. *Park. parad. p. 161.*

Crocus vernus latifolius, pallido flore, viridibus venulis, &c. *Raii. hist. 1175.*

The above is a copious synonymy of the *Crocus lacteus*, which we so designated in the year 1810, having the year before published it in the first Volume of the Horticultural Society's Transactions as variety β, of *Crocus lagenæflorus* of Salisbury, from having only seen two withering flowers of

it ; but supposing, at the time, it would ultimately prove to be a distinct species. In the Seventh Volume of the Horticultural Transactions, Mr. Sabine adopted that name, and gave a figure of the plant in a magnificent and beautiful group of other species and varieties of *Crocus*, cultivated in the Garden of the Horticultural Society at Chiswick.

Few plants have had their history more confused than the present. It is the *Crocus luteus* of Rœmer and Shultes's *Systema Vegetab.* v. 1. p. 368, but blended with at least two other species, which it would require more than our limited space will admit to clear up. Indeed, our plant has not been well understood by any authors we have consulted, except Salisbury and Sabine ; who have also described its present beautiful variety β .

These plants are natives of Mœsia, a country of Turkey in Europe, and have been cultivated in England ever since the days of Parkinson ; but at present they are very rare in our collections, flowering rather after the middle season of the Spring Crocuses, and by far less freely than most of them ; the pencilled variety being still later than the cream-coloured kind. They prefer a light soil, and open situation in the Garden ; requiring to be taken up, and transplanted once in three years, singly, at about two inches apart, and rather more in depth ; after which, in the following Spring, their soft-hued, and remarkably pencilled flowers, will make a good appearance, if planted in patches, of a score roots or more, intermingled with other vernal plants. A. H. H.



1. The Stamens. 2. The Style. 3. The same magnified.

ERRATUM.—On the opposite side of page 191, line 4, after the word that, add, is.

P. 27 *Thalictrum flavum*

LOASA nitida.*Glossy-leaved Loasa.**Linnean Class and Order.* POLYANDRIA MONOGYNIA.*Natural Order.* LOASEÆ. *Juss. in ann. mus. 5. p. 21.**LOASA.* *Suprà fol. 192. series 2.*

-
- L. nitida*, hispida; foliis oppositis cordato-oblongis sinuato-lobatis dentatis, laciniis calycinis elongatis, petalis saccatis: appendicibus exteriorum lanceolatis acuminatis medio aristatis. *D. Don Mss.*
- Loasa nitida.* *Lam. dict. 3. p. 581. Willd. sp. pl. 2. p. 1177. Juss. in l. c. 5. p. 25. t. 2. f. 2. Persoon syn. 2. p. 71. Bot. mag. t. 2372. Hook. exot. fl. 1. t. 83. Hook. et Arnott in bot. misc. 3. p. 328.*
- L. tricolor.* *Ker in bot. reg. t. 667.*
- L. acanthifolia.* *EjUSD. t. 785?*
- L. Placei.* *Lindl. in hort. trans. 6. p. 95?*
-

Root annual. *Stems* much branched and spreading, which, as well as the rest of the plant, are copiously clothed with long, straight, stimulating bristles, intermixed with short hairs. *Leaves* opposite, cordate, oblong, more or less deeply lobed and toothed, from 3 to 6 inches long; lower ones stalked; upper ones sessile, slightly embracing the stem. *Flowers* solitary, axillary or terminal, drooping. *Peduncles* filiform, bristly, an inch to an inch and a half long. *Calycine segments* linear-lanceolate, attenuated, spreading. *Outer 5 petals* rather longer than the calyx, of an orange yellow, hollow, saccate, bristly, with a narrow channelled claw; the inner ones short, white, marked with a crimson spot at the middle, cucullate, bifid, dilated towards the base, the edges involute. *Appendages* lanceolate, acuminate, white, with a large crimson blotch, furnished on the outer edge, about the middle, with a long, slender, capillary bristle. *Sterile stamens* white, dilated and fringed at the base, prolonged into a bristle at the apex. *Anthers* yellow. *Ovary* 5-celled, crowned by a tuft of bristly hairs. *Style* awl-shaped, hairy at the base. *Stigma* undivided, obtuse.

A hardy annual, native of Chile, whence it was introduced to our gardens about ten years ago. It is a variable plant, differing much in the size and form of its leaves ; but the shape of the appendages, and elongated segments of the calyx, remain permanent throughout, so that we are inclined to think even *Loasa Placei* will prove only another form of this species.

Our drawing was taken from a specimen communicated by Sir George Staunton, Bart., having been raised from seeds received from Mr. Hugh Cuming.

Planted in a poor soil, it blossoms abundantly ; but in a rich one, it becomes luxuriant, and unsightly.

The generic name is already explained in the last Number. *D. Don Mss.*



1. Calyx. 2. Outer Petal. 3. Stamens. 4. Pistil. 5. Inner Petal, with its appendages. 6. Sterile Stamens.



Hart del

Tab by Ridgway June 1883.

NICOTIANA longiflora.

Long-flowered Tobacco.

Linnean Class and Order. PENTANDRIA MONOGYNIA.

Natural Order. SOLANEÆ. *Brown prodr.* 1. p. 443.

NICOTIANA. *Suprà fol.* 107. series 1.

N. longiflora, scabra; foliis caulinis amplexicaulibus cordato-lanceolatis acuminatis, corollæ tubo filiformi calyce subfoliaceo 5-plò longiori: lobis ovato-lanceolatis acutis. *D. Don Mss.*

Nicotiana longiflora. *Cavan. descr.* p. 106. *Rœm. et Schult. syst. veg.* 4. p. 322.

Root annual. *Stem* erect, much branched and spreading, like the other parts of the plant, copiously clothed with glanduliferous hairs, and rough, with short bristles, callous at the base. *Branches* long, twiggy, filiform, rough. *Leaves*, the radical ones ovate-lanceolate, acute, waved, narrowed at the base, scarcely stalked, about a span long, and 3 inches broad; those of the stem sessile, lanceolate, acuminate, wavy, and repand at the margin, scabrous above, about three inches long, with a broad and cordate base; the upper ones narrow, and almost linear. *Flowers* lateral, solitary, stalked, ascending, frequently placed opposite the leaves. *Peduncles* stout, round, hairy, from half an inch to an inch long. *Calyx* an inch in length, with the tube rather ventricose, and marked with 5 angles; the limb divided into 5, lanceolate-linear, obtuse, erect, unequal segments, rather longer than the tube, and furnished with a prominent midrib. *Corolla* of a dingy white, afterwards tinged with purple; *tube* filiform, straight, densely pubescent, 4 or 5 inches long, with the mouth but little widened; the limb spreading, deeply five-lobed, plaited, above of a clear white, underneath greenish, afterwards becoming of a dingy purple; lobes ovate-lanceolate, acute, at first involute at the edges. *Stamina* 5, unequal, inserted in the mouth of the corolla. *Fila-*

ments slender, cylindrical, very short, and smooth. *Anthers* two-celled, of a deep violet colour; the cells united along the middle by means of the connectivum, but free at both extremities. *Pollen* sulphur-coloured. *Ovarium* oblong, 2-celled, surrounded at the base by a fleshy, repandly-crenate, orange ring. *Style* filiform, smooth. *Stigma* projecting beyond the mouth of the corolla, peltate, composed of 2 very short, spreading, viscid lobes.

This curious species of Tobacco forms another interesting addition to the flower-border, its long, slender blossoms being produced in great abundance, and for several months in succession. The singular phenomenon, common to many white and dingy flowers, of expanding only at night, or in cloudy weather, occurs, also, in this plant. Like *Nierembergia phœnicea*, it is a native of Buenos Ayres, where it was discovered by Mr. Tweedie; and from seeds received from that enterprising collector, the plant was raised by my worthy friend, Mr. Neill, in whose garden, at Canonmills, near Edinburgh, I had the pleasure of seeing it, for the first time, in full blossom, in September last. It forms one of the aberrant species of *Nicotiana*, coming near to *Nierembergia*, which is principally distinguished by the greater degree of development in the segments of the calyx.

Cavanilles states his *N. longiflora* to have been collected in Chile, by M. Née; and, although his description is rather meagre, it, nevertheless, accords so well with our plant, that I have no doubt of their identity.

The plant is a half-hardy annual, thriving best in light rich soil, and is increased by seeds.

Our drawing was taken from a plant that had been received by Mr. Lambert from Mr. Neill, and which flowered at Boyton last month.

The generic name is from Jean Nicot, Envoy from the Court of France to Portugal, whence he brought the plant in 1560. *D. Don Mss.*



1. Corolla laid open, to show the insertion of the Stamina. 2. Pistil.



SCHIZANTHUS pinnatus; var. humilis.*Dwarf Schizanthus.*

Linnean Class and Order. DIANDRIA MONOGYNIA.*Natural Order.* SCROPHULARINÆ. *Brown prodr.* 1. p. 433.*SCHIZANTHUS.* *Suprà fol.* 63. series 1.

S. pinnatus, pedunculis fructiferis apice inflexis secundis, corollæ labii inferioris laciniis lateralibus internodiâ obcordatâ longioribus; supremâ cuneatâ emarginatâ. *D. Don Mus.*

Schizanthus pinnatus. *Ruiz et Pavon fl. peruv. et chil.* 1. p. 13. t. 17. *Vahl enum.* 1. p. 171. *Persoon syn.* 2. p. 161. *Bot. Mag.* t. 2404. *Hook. exot. fl.* 1. t. 73.

β. humilis, staturâ humiliori, foliis lyratis: segmentis subrotundis crenatis integrisve, racemis confertis.

Schizanthus pinnatus β humilis. *Lindl. in Bot. Reg.* t. 1562.

Whole herb thickly clothed with pubescence, intermixed with longer hairs, which are crowned by an ovate, pellucid, yellow gland. *Root* fibrous, annual. *Stem* erect, cylindrical, much branched and bushy, from a span to a foot high. *Leaves* alternate, pinnatifid, an inch and a half long; upper ones shorter, lyrate; the segments oblong or rounded, obtuse, with blunt teeth, frequently only repand, and sometimes quite entire; the terminal one larger, rounded, mostly crenate. *Bractes* cuneiform, leafy, repandly toothed, or entire. *Peduncles* spreading, filiform, erect, afterwards becoming deflexed and incurved at the apex, thrice longer than the bractes, clothed with glanduliferous violet-coloured hairs. *Calyx* 5-partite; the segments spathulate, spreading at the apex, the outer three larger, the whole becoming connivent after flowering. *Corolla* tube shorter than the calyx, and of a bright purple; the limb spreading, with an orbicular outline of a rose-colour, paler, and almost approaching to white towards the centre; 2 lateral segments cut into spathulate, blunt, sometimes emarginate lobes; upper lip cuneiform, emarginate, lower one tripartite, of a deep reddish purple,

with the lateral segments cuneately oblong, curved, somewhat truncate; the intermediate one obcordate, hollow, inclosing the stamens in æstivation. *Stamens* 4; the 2 upper ones shorter, sterile. *Filaments* compressed, red, hairy. *Anthers* cordate, bilocular, of a pale olive; the cells connate, opening lengthways, confluent at the top. *Ovarium* smooth, bilocular, green, seated on a fleshy disk. *Style* filiform, purple. *Stigma* a green, obtuse gland.

This very pretty variety, which is, as far as we have remarked, permanent in cultivation, was introduced last year from seeds collected in Chile by Mr. Hugh Cuming. It forms a little compact bush, rarely exceeding a foot in height, but oftener below that stature, and is altogether a more showy and elegant plant than the ordinary form of *S. pinnatus*.

The plant flourishes in any light soil, and ripens its seeds freely in the open border. Young plants, raised in the Autumn, and protected in a pit or frame throughout the Winter, and planted out in the open border about the end of April, or beginning of May, will be found to succeed best.

The plant whence our drawing was taken, blossomed at the Botanic Garden, Chelsea, in the beginning of May last.

The generic name will be found explained at fol. 63 of the first series. *D. Don Mss.*





Int. An.

Pubby J. Hartway July 1877

ÓROBUS aurántius.

Orange-flowered Bitter-Vetch.

Linnean Class and Order. DIADELPHIA DECANDRIA.
Natural Order. LEGUMINOSÆ. *Juss. gen. p. 345.*
OROBUS. Suprà fol. 115.

O. aurántius, foliolis sub-5-jugis rhombeo-ovatis acutis utrinque concoloribus glabriusculis, pedunculis elongatis multifloris, dentibus calycinis 4 superioribus brevissimis, ovario pedicellato. *D. Don Mus.*
Orobús aurántius. *Marsch. à Bieb. fl. taur. cauc. suppl. p. 462. Dec. prodr. 2. p. 375. Spreng. syst. 3. p. 260.*

Smaller and more slender than *Orobús luteus*, figured at Tab. 115, from which it also differs in its broader, nearly smooth leaflets, green on both sides, broader stipules, and shorter calyx, with the lateral pair of teeth considerably shorter than in that species. The flowers are of a deeper yellow, inclining to orange. The ovarium is stalked, but in the stigma we have not remarked any material difference, it being bearded along the upper surface, as in *O. luteus*.

Our drawing was taken in May last, at the Nurseries of Messrs. Whitley, Brames, and Milne, at Fulham, being the only collection in which we have observed the species.

The plant is perennial, requires a loamy soil, and may be increased both by parting the roots, and by seeds.

It is a native of the western regions of Caucasus, where it was originally discovered by M. Steven. It is essentially distinguished from the *Orobús croceus* of Desfontaines by its smooth leaves, attenuated at both ends, and by the very unequal teeth of its calyx.

The name *Orobus* was given by the Greeks to a kind of Vetch, but of what species is uncertain ; being, as it is supposed, compounded of *ορω*, to excite, and *βους*, an ox, alluding to its beneficial effects upon oxen. *D. Don Mss.*





CALCEOLARIA purpurea; var. elegans.

Elegant Purple Slipperwort.

Linnean Class and Order. DIANDRIA MONOGYNIA.

Natural Order. SCROPHULARINÆ. *Brown prodr.* 1. p. 433.

CALCEOLARIA. Suprà fol. 130. series 2.

C. purpurea, herbacea; foliis radicalibus cuneato-oblongis dentato-serratis rugosis scabris; caulinis superioribus cordatis integerrimis, paniculâ corymbosâ diffusâ, corollæ labio inferiore orbiculato repando. *D. Don Mss.*

Calceolaria purpurea. *Graham in Bot. Mag.* t. 2775.

β. elegans, floribus majoribus lilacinis.

Plant herbaceous, perennial. *Stems* rather slender, upright, branched, cylindrical, copiously clothed with glandular pubescence, viscid, of a pale livid purple, from a span to a foot high. *Leaves*, the radical ones cuneate-oblong, or lanceolate, acute, coarsely and unequally serrated, dull green, and pubescent on both sides, wrinkled, and rough above with coarser hairs, varicose beneath, from the middle downwards narrowed and entire; those of the stem ovate, acuminate, spreading, toothed at the apex, attenuated at the base, but scarcely stalked; the upper ones and bractes embracing the stem, cordate, acuminate, entire, frequently reflexed. *Panicle* corymbose, ample, spreading. *Peduncles* divaricately spreading, variously forked. *Pedicels* slender, capillary, pubescent, glandular, varnished, about half an inch long. *Calyx* 4-partite, copiously clothed with glandular pubescence; the segments ovate, rather obtuse. *Corolla* lilac, with a very short white tube; upper lip prominent, somewhat globular, helmet-shaped; the lower one 3 or 4 times larger, orbicular, compressed, marked above with several depressed lines, the edge repandly crenate; the mouth pale tawny. *Filaments* very short, white, compressed, thickened at the base. *Anthers* pale yellow, the cells distinct, ventricose

opening lengthways. *Ovarium* ovate, bilocular, minutely glandular. *Style* cylindrical. *Stigma* an obtuse gland.

We are indebted to Mr. Wheeler, Nurseryman, Warminster, Wilts, for the opportunity of giving a figure of this fine variety, raised by him from Chilian seeds, received from Mr. Hugh Cuming. We had the pleasure of seeing the plant when in full flower, and we have seldom witnessed anything so beautiful; the large spreading panicle, with its profusion of blossoms of various shades of purple, contrasted with the dark green leaves and glossy stem, had a pretty effect.

Like the other variety, this is also perennial, and will doubtless succeed very well in the open border during the Summer months.

For the meaning of the generic name, see fol. 130 of the present series. *D. Don Mss.*



1. Calyx with the Pistil. 2. Upper lip of the Corolla, shewing the insertion of the Stamens.



TRIFOLIUM uniflorum.

Single-flowered Trefoil.

Linnean Class and Order. DIADELPHIA DECANDRIA.

Natural Order. LEGUMINOSÆ. Juss. gen. p. 345.

TRIFOLIUM. *Calyx* tubulosus, 5-fidus: *laciniis* subulatis. *Corolla* sæpiùs gamopetala: *carina* alis brevior. *Stamina* diadelphea. *Legumen* calyce inclusum, indehiscens, oligospermum.

Herbæ (plerumque hemisph. boreal.) *foliis ternatis, stipulis petiolo adnatis, floribus capitatis bracteatis.* D. Don Mss.

T. uniflorum, subacaule; foliolis ovatis argutè serratis, capitulis subtrifloris, dentibus calycinis erectis subæqualibus, corollà calyce duplò longiori, leguminibus dispermis. D. Don Mss.

Trifolium uniflorum. Linn. *sp. pl.* p. 1085. *Amæn.* 4. p. 285. *Willd. sp. pl.* 3. p. 1378. *Persoon syn.* 2. p. 351. *Smith prodr. fl. græc.* 2. p. 99. *Dec. prodr.* 2. p. 203.

T. Buxbaumii. *Sternb. in florâ* 1820. p. 600.

T. vernum repens purpureum. *Buxb. cent.* 3. p. 17. t. 31. f. 1.

Melilotus cretica humillima humifusa, flore albo magno. *Tournef. cor.* 28. *Spica trifolia.* *Alpin. exot.* 169. t. 168.

Plant perennial, tufted, slightly clothed with white adpressed silky hairs. *Stems* prostrate, very short, purplish. *Leaves* on slender, filiform, reddish footstalks, about an inch and a half long, and marked above with a shallow furrow. *Leaflets* on a short stalk, ovate, or rounded ovate, pointed, nearly smooth, with numerous sharp, rather spinous teeth, scarcely half an inch long, of a lively green, furnished with numerous obliquely, parallel, prominent, nerves, frequently marked above with oblong dark red spots, glossy beneath; the base rather cuneiform, and entire. *Stipules* short, broad, and scariosely membranous, whitish, ending in two long bristle-shaped points. *Peduncles* very short, not exceeding the adherent portion of the stipules. *Flowers* large, singly, or in threes. *Pedicels* very short, club-shaped, arched. *Bractes* ovate, concave, pointed, scariosely, shorter than the pedicels. *Calyx* tubular, almost glabrous, rather attenuated at the

base, about a nail in length, furnished with 10, elevated ribs, and five rather long, linear-lanceolate, pointed, upright, nearly equal teeth. *Corolla* gamopetalous, twice the length of the calyx. *Wings* oblong, spathulate, retuse, much longer than the mucronulate keel; both of a pale yellow, or white. *Vexillum* oblong, emarginate, lilac, much longer than the wings. *Filaments* 10, white, with one separate. *Anthers* incumbent, bilocular, yellow. *Style* compressed, smooth. *Stigma* rather broad, flat, emarginate, and pruinose.

This elegant little Trefoil is not unlike our native *T. subterraneum*, but is altogether a plant of larger dimensions, and is, moreover, perennial. The heads are few-flowered in both species, and the calyx and corolla comparatively long. Buxbaum's fig. 2, referred by most authors to the present, appears, from its smaller flowers, and obcordate leaflets, rather to belong to *subterraneum*. The name *uniflorum* is by no means a happy one, the flowers being mostly in threes.

The plant is quite hardy, and admirably suited for a rock-work, where its numerous large blossoms, issuing from the bosom of its bright green leaves, make a showy appearance during the month of May.

It thrives best in a light sandy soil, and is increased by parting the roots.

Our drawing was taken at the Botanic Garden, Chelsea, in May last.

The generic name is compounded of *tres*, three, and *folium*, a leaf, and is but little altered in the English version.

D. Don Mss.



CORRECTIONS IN THE TWO PRECEDING NUMBERS.

Fol. 192, line 14, for *exteriorum*, read *interiorum*.

Fol. 195, line 5, for *exteriorum*, read *interiorum*.

BOOKS QUOTED IN VOLUMES ONE AND TWO.

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- Adans. fam.* Adanson (Michel.) Familles des plantes, 2 vol. in 8vo. Paris, 1763.
- A. DC. camp.* De Candolle (Alphonso.) Monographie des Campanulees, 4to. 1880.
- All. ped.* Car. Allioni Flora Pedemontana.
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- Bart. flor. amer.* Barton (W.) Barton's Flora of North America, 2 vol. 8vo.
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- Goldie** in *Edinburgh Philosophical Journal*.
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- Mill. ic.* Id. *Figures of plants described in the Gardener's Dictionary*, 2 vol. in fol. *London*, 1760.
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